LIBRARY JOURNAL

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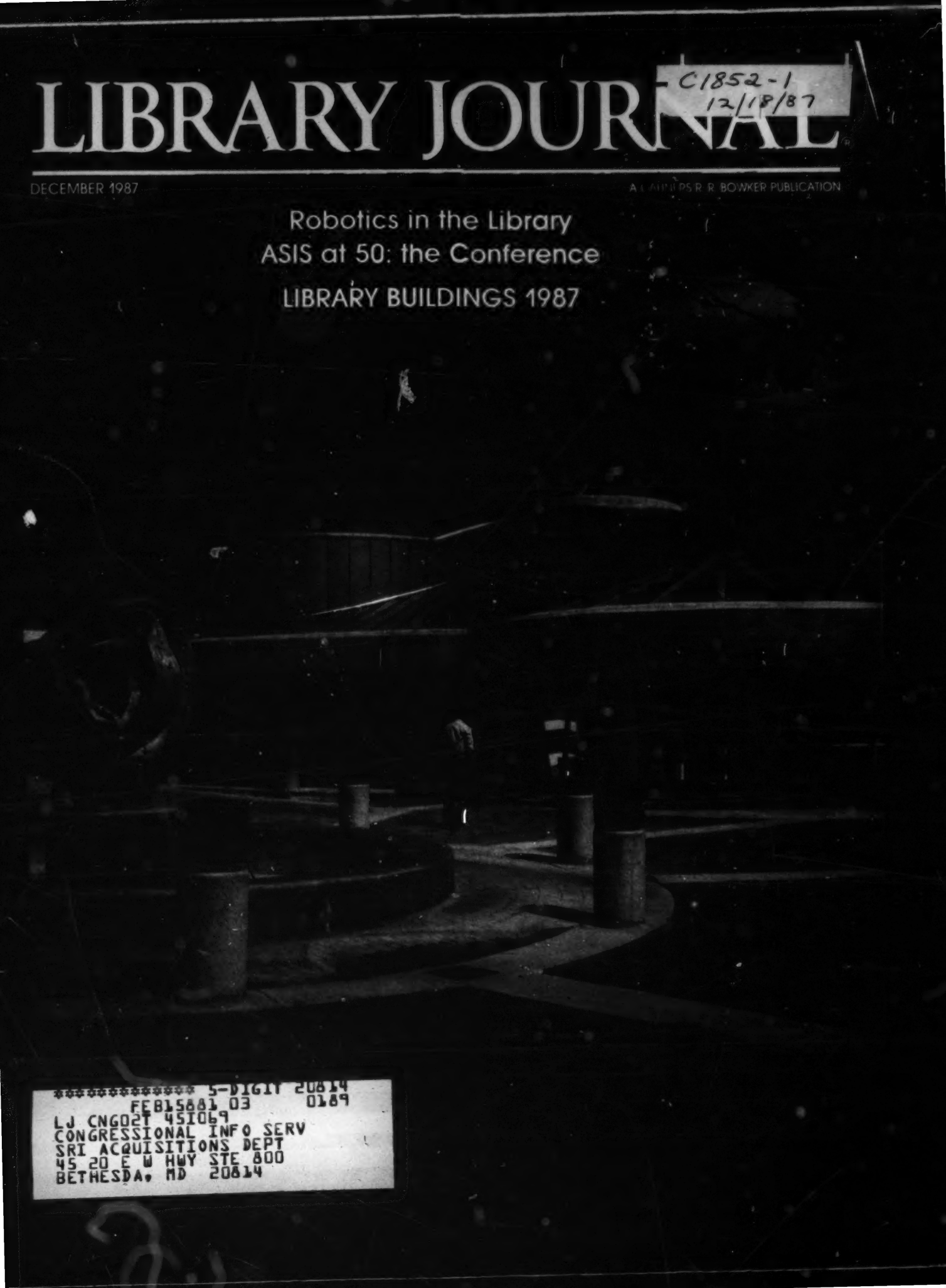
DECEMBER 1987

A REED REINHOLD PUBLICATION

Robotics in the Library

ASIS at 50: the Conference

LIBRARY BUILDINGS 1987



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The entryway and courtyard of the Donald Dungan Branch Library, Costa Mesa, California. Ralph Allen & Partners are the architects of the $1.3 million new building, part of the Orange County PL. Photograph by Carlos Von Frankenberg

Letters 8
Calendar 16
People 41
Professional Reading 84
Checklist 86
Magazines 88
Buyers' Guide 90
AV Reviews & Distributors 92
Library Best Sellers 144
Classified 134
Index to Advertisers 143

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FEATURES

Library Buildings 1987 45
LJ's annual survey of new and future library construction
by Bette-Lee Fox with Ann Burns & Michael Rogers

Robots in the Library: Automated Storage and Retrieval Systems 67
Space saving storage systems / by John Kountz

Financing Public Library Buildings 73
Discovering trends in LJ's data / by Richard B. Hall

A New Social Concern at ASIS 79
Ethics and the public interest at the 50th annual conference

EDITORIAL

Preservation, Priorities, and Politics 6
Fast action on "slow fires"

LATE BULLETINS 19

NEWS 22

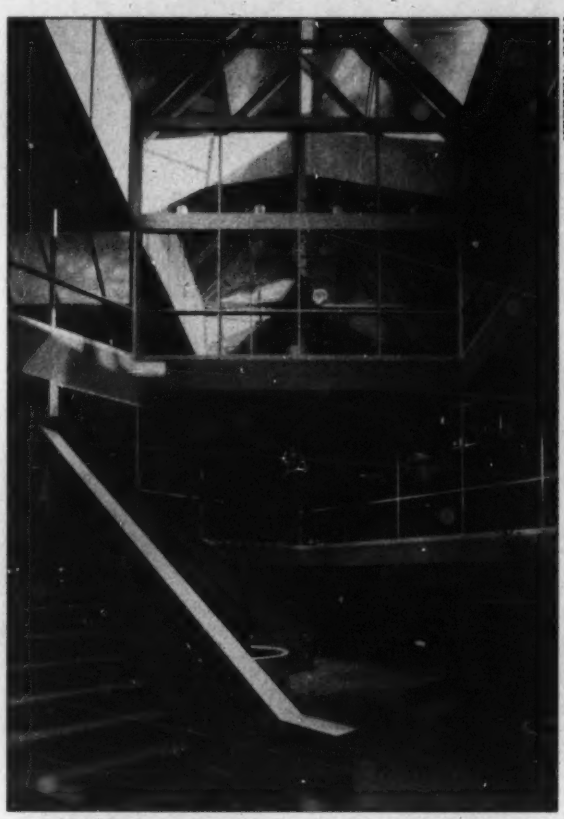
An overview of ALA's Midwinter conference in San Antonio / Alternative bookstores in the Twin Cities harassed / ALA's Publishing Services and USSR's Goskomizdat sign cooperative protocol / Kellogg Foundation gives $4.7 million for Michigan research libraries database / West Virginia's Read Out II a huge success / Intellectual freedom clearinghouse set up in Oregon / Boulder passes Colorado's largest library bond issue / Design/build architectural competition for new Chicago central library

BOOK REVIEW 100

Julius Lester's *Lovesong: becoming a Jew* p. 105 / Paul Kennedy's *The Rise and Fall of the Great Powers* p. 110 /Richard Ellmann's *Oscar Wilde* p. 114 / I.F. Stone's *The Trial of Socrates* p. 116 / Thomas Flanagan's *The Tenants of Time* p. 127 / John L'Heureux's *A Woman Run Mad* p. 128 / and more . . .

LJ's annual architectural issue paints a statistical portrait of 249 public and 33 academic libraries completed between July 1, 1986 and June 30, 1987

Library Buildings 1987



NICK WHEELER

Olin/Chalmers Lib., Kenyon College, Gambier, Ohio

By Bette-Lee Fox with Ann Burns & Michael Rogers

AN ASTOUNDING thing occurred in the world of public library construction. There were 249 projects completed during the last fiscal year (101 new buildings, 148 additions and renovations), representing the second highest number in the last ten years, and the sixth highest number in the last 20 years. After some relatively lean times as far as building growth is concerned, we have gotten back on track with new and better facilities for public libraries.

This trend isn't slowing down, either. In our third annual "Projects in Progress" feature (page 59), we have information on 586 (505 public, 81 academic) projects that are in various stages of completion. Those projects that were in progress last year that are now completed are listed in the tables with an asterisk (*).

The largest new academic projects are a three-building complex (one being the library) at Saginaw Valley State College, University Center, Michigan ($20 million) and the Texas College of Osteopathic Medicine in Fort Worth ($10.8 million). The largest addition (involving two different levels and additional space on all four sides of the existing structure) is the $29 million project at the University of Tennessee, Knoxville.

The largest new public building is the East Library and Information Center in Colorado Springs, Colorado, costing $10,243,986 and measuring 63,000 square feet. The project was funded entirely through city and library monies. Two other large new buildings are the Huntsville-Madison County Public Library, Alabama, and the Monmouth County Library Headquarters in Manalapan, New Jersey, costing $9.2 million and $7.5 million, respectively. Large addition and renovation projects are the Finkelstein Memorial Library, Spring Valley, New York ($4.4 million) and the Schaumburg Township Public Library, Illinois ($4.8 million).

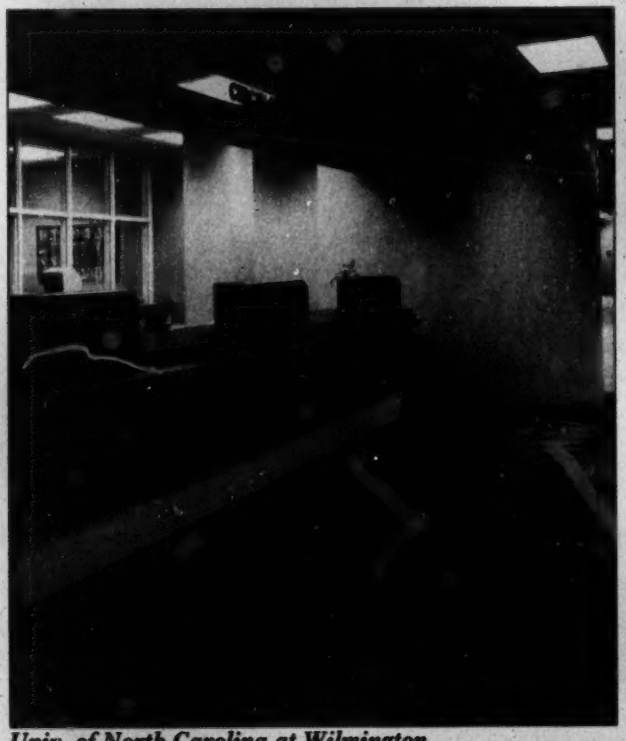
An emphasis on energy-efficient design, the norm recently, is now coupled with the desire to create beautiful, functional buildings that enhance and harmonize with the natural environment of the area. Use of natural products and materials from the existing landscape allows the libraries to segue into their surroundings, offering visual consistency and intellectual resonance for the patrons.

If you think the number of buildings is phenomenal, hold onto your hats, folks. Funding for the 249 projects amounted to $217 million, the highest in 20 years. State funds exceeded federal funding (one of the few times), contributing 5.9 percent while federal funds were 4.8 percent. Local government and library funds kicked in with a whopping 83.1 percent. (For a detailed analysis of funding trends, see Richard Hall, "Financing Public Library Buildings," p. 73.)

Another year, another substantial contribution to the future of libraries in the United States. With all these libraries, people must be using them. It's a comforting thought, isn't it?

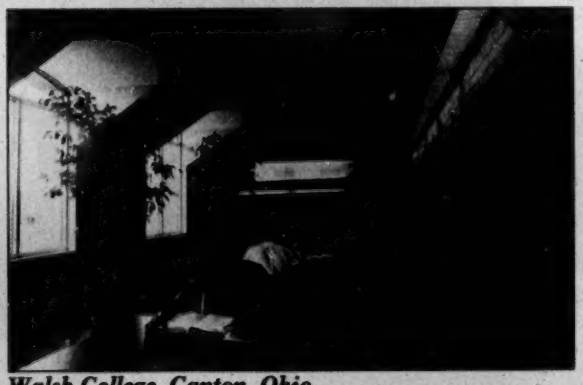
Bette-Lee Fox is Managing Editor; Ann Burns and Michael Rogers are Staff Editors, *LJ*

Academic Library Buildings



Univ. of North Carolina at Wilmington

College of Saint Mary, Omaha, Neb.



Walsh College, Canton, Ohio

Name of Institution	Project Cost	Gross Area	Assignable	Non-Assignable	Sq.Ft. Cost	Construction Cost	Equipment Cost	Book Capacity	Seating Capacity	Architect
Saginaw Valley State College,[1] University Center, Mich.	$20,880,416	67,766	50,136	17,630	n/a	n/a	$498,487	229,328	425	Dow, Howell, Gilmore
* Texas College of Osteopathic Medicine, Fort Worth	10,850,000	110,488	77,640	32,848	75.35	$8,325,000	1,075,920	200,000	649	F & S Partners
* Clarke College, Dubuque, Ia.	6,276,059	57,920	52,700	5,220	85.25	4,937,680	1,042,410	200,000	224	Vickery, Oversat, & Awsumb
* College of Saint Benedict, Saint Joseph, Minn.	5,105,321	55,972	40,664	15,308	77.12	4,316,379	427,359	200,000	600	Warner, Burns, Toan & Lunde
* Texas A&M Univ. at Galveston	4,488,000	25,925	21,912	4,013	104.15	2,700,000	580,000	100,000	200	Rapp Partners
* Cedarville College, Ohio	4,350,000	66,000	60,516	5,484	53.03	3,500,000	850,000	200,000	541	Crider Ptnrs. & J. Lecklider
Huntington College, Ind.	3,176,000	42,250	33,750	8,500	58.46	2,470,000	206,000	150,000	260	Inter Design Group
Daniel Webster College, Nashua, N.H.	2,080,244	23,319	21,428	1,891	80.10	1,867,752	212,492	42,075	233	John A. Carter
College of Saint Mary, Omaha, Neb.	1,500,000	23,000	18,500	4,500	56.39	1,297,000	203,000	100,000	220	Barry Ward
Science & Eng. Resource Ctr., Rutgers University, Piscataway, N.J.	n/a	n/a	5,987	n/a	n/a	n/a	200,000	2,500	238	Hillier Group

[1] Library part of 291,000 gross square foot, three-building complex

Clemens Lib., College of St. Benedict, St. Joseph, Minn.

Daniel Webster College Library, Nashua, N.H.

Jack K. Williams Lib., Texas A&M University at Galveston

Guggenheim Memorial Lib., Monmouth Coll., W. Long Branch, N.J.

John C. Hodges Library, University of Tennessee, Knoxville

Name of Institution		Project Cost	Gross Area	Assignable	Non-Assignable	Sq.Ft. Cost	Building Cost	Equipment Cost	Book Capacity	Seating Capacity	Architect
University of Delaware, Newark	Total	$15,000,000	289,000	227,000	62,000	$51.90	$15,000,000	0	n/a	3,100	Richter, Cornbrooks, Gribble
	New	n/a	132,000	n/a	n/a	n/a	n/a	0	n/a	n/a	
	Renovated	n/a	157,000	n/a	n/a	n/a	n/a	0	n/a	n/a	
Iowa State University, Ames	Total	12,183,000	332,255	241,023	91,232	25.71	8,543,800	$2,500,000	1,850,000	2,676	Charles Herbert & Assocs.
	New	8,500,000	106,037	71,102	34,935	55.89	5,926,800	1,500,000	338,099	757	
	Renovated	3,683,000	226,218	169,921	56,297	11.57	2,617,000	1,000,000	1,513,000	1,919	
Kenyon College, Gambier, Ohio	Total	6,750,000	100,110	71,589	28,521	49.79	4,984,200	1,039,798	480,000	534	Shepley, Bulfinch . . .
	New	5,500,000	53,520	38,976	14,544	79.26	4,242,200	943,398	250,000	310	
	Renovated	1,250,000	46,590	32,613	13,977	15.93	742,000	96,400	230,000	224	
* University of North Carolina at Wilmington	Total	n/a	163,500	130,800	32,700	39.91	6,526,071	359,000	475,000	1,000	Boney Architects
	New	n/a	93,500	74,800	18,700	64.15	5,998,571	n/a	n/a	600	
	Renovated	n/a	70,000	56,000	14,000	7.53	527,500	n/a	n/a	400	
University of the Pacific, Stockton, Calif.	Total	6,200,000	60,000	n/a	n/a	84.69	5,081,340	380,000	60,000	700	Brandenburger Assocs.
	New	4,700,000	30,000	n/a	n/a	131.10	3,932,924	297,150	45,000	525	
	Renovated	1,500,000	30,000	n/a	n/a	38.28	1,148,416	82,850	15,000	175	
* Lafayette College, Easton, Pa.	Total	4,600,000	66,458	57,087	9,371	55.75	3,705,000	135,000	441,000	526	Shepley Bulfinch . . .
	New	3,458,000	18,999	16,301	2,698	142.37	2,705,000	n/a	n/a	209	
	Renovated	1,142,000	47,459	40,786	6,673	21.07	1,000,000	n/a	n/a	317	
Saint Leo College, Fla.	Total	1,851,915	38,400	31,280	7,120	37.90	1,455,442	263,915	150,000	390	Schweizer Assocs.
	New	n/a	23,700	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	Renovated	n/a	14,700	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
* Walsh College, Canton, Ohio	Total	1,116,079	18,916	17,024	1,892	50.42	953,744	162,335	150,000	236	I.A. Bower
	New	276,599	5,843	5,743	100	45.63	266,599	10,000	26,000	82	
	Renovated	839,480	13,073	11,281	1,792	52.56	687,145	152,335	124,000	154	
McNeese State University, Lake Charles, La.	Total	801,234	80,517	40,517	40,000	7.22	581,200	105,034	28,500	870	Architecture Six
	New	801,234	80,000	40,000	40,000	n/a	n/a	105,034	28,500	850	
	Renovated	0	517	517	0	n/a	n/a	0	0	20	
Mercy College Libraries, Dobbs Ferry, N.Y.	Total	618,700	6,640	6,100	540	82.38	547,500	28,603	23,000	110	Lothrop Assocs.
	New	598,700	5,600	5,200	400	94.55	529,500	28,603	23,000	80	
	Renovated	20,000	1,040	900	140	17.31	18,000	0	0	30	

Health Sciences Lib., Texas Coll. of Osteopathic Medicine, Ft. Worth

PAUL ROBERTS

Clarke College, Dubuque, Iowa

Name of Institution	Project Cost	Gross Area	Assignable	Non-Assignable	Sq.Ft. Cost	Construction Cost	Equipment Cost	Book Capacity	Seating Capacity	Architect
* University of Tennessee, Knoxville	$29,000,000	360,000	262,000	98,000	$69.44	$25,000,000	$4,000,000	1,900,000	3,500	Library Assoc. Archs.
Grambling State University, La.	n/a	26,650	17,241	9,409	80.45	2,144,000	133,378	n/a	n/a	Rice W. Gregory III

Name of Institution	Project Cost	Gross Area	Assignable	Non-Assignable	Sq.Ft. Cost	Construction Cost	Equipment Cost	Book Capacity	Seating Capacity	Architect
Univ. of North Carolina at Chapel Hill	$5,477,500	186,228	n/a	n/a	$26.49	$4,933,639	$150,000	n/a	n/a	Polier Ballard Assocs.
Bapst Library & Burns Library of Special Collections, Boston Coll., Chestnut Hill, Mass.	n/a	60,000	44,000	16,000	80.00	4,800,000	n/a	200,000	525	Architects Collab.
College of St. Scholastica, Duluth, Minn.	2,600,220	n/a	20,817	n/a	n/a	1,600,000	n/a	150,000	275	William Moser
* Avery Fisher Ctr. for Music & Media, Bobst Lib., New York University	n/a	14,000	12,000	2,000	30.71	430,000	625,500	0	316	Jane Yu
Stanford University	982,000	10,315	9,080	1,235	27.53	284,000	618,000	350,000	10	none
Swain Library of Chemistry/Chemical Engineering, Stanford University	595,000	7,980	5,510	2,470	41.98	335,000	60,000	55,000	70	Arthur Craig Steinman
Guggenheim Memorial Library,[1] Monmouth College, West Long Branch, N.J.	299,999	17,694	0	17,694	16.95	299,999	0	0	0	none
Indiana University, Bloomington	208,696	6,610	6,610	0	24.31	160,712	47,984	54,260	73	Univ. Physical Facities.
St. Lawrence Univ., Canton, N.Y.	135,837	2,520	2,304	216	21.52	54,230	81,607	44,608	10	St. Lawrence Univ....
Northern Illinois Univ., DeKalb	118,416	327,273	222,996	104,277	00.17	55,000	53,416	1,300,000	2,200	none
Butler University, Indianapolis	75,000	1,394	n/a	n/a	70.70	98,553	n/a	n/a	n/a	none

[1] Restoration of outside ornamental balustrades, cornices, windows, walls.

Public Library Buildings

Carnegie Library, Ballinger, Tex.

Symbol Code: B—Branch Library; BS—Branch & System Headquarters; M—Main Library; MS—Main & Systems Headquarters; S—System Headquarters; n/a—not available

Community	Pop. in M	Code	Project Cost	Const. Cost	Gross Sq. Ft.	Sq.Ft. Cost	Equip. Cost	Site Cost	Other Costs	Volumes	Reader Seats	Federal Funds	State Funds	Local Funds	Gift Funds	Architect
ALABAMA																
• Carrollton	1	M	$167,957	$144,299	2,700	$53.44	0	$15,000	$8,658	10,000	14	$75,000	0	$3,200	$89,757	James H. Fitts III
• Huntsville[1]	211	M	9,254,647	7,537,333	123,000	61.28	1,165,000	Owned	552,314	600,000	933	0	$154,400	8,155,000	945,247	Jones & Herrin
ARIZONA																
Flagstaff	85	MS	4,032,300	3,100,000	34,000	91.18	189,300	Owned	743,000	150,300	197	0	0	4,000,000	32,300	Snowdon & Hopkins
• Glendale	130	MS	7,415,860	5,400,860	64,166	84.17	1,170,000	75,000	770,000	250,000	250	0	0	7,415,860	0	J. Barry Moffitt & Assocs.
• Mesa	54	B	1,707,881	1,427,535	15,152	94.21	176,462	Owned	103,884	70,000	148	0	0	1,707,881	0	Nelson Boren Architects
• Scottsdale	115	B	4,178,000	2,968,619	31,850	93.21	623,474	Owned	585,907	60,000	250	0	0	4,178,000	0	Dean/Hunt/Krueger
CALIFORNIA																
Calexico	18	M	1,339,398	1,200,646	12,845	93.47	50,752	Owned	88,000	60,000	76	800,000	8,994	530,404	0	Coup & Smith
• Costa Mesa[2]	86	B	1,361,000	1,200,000	7,800	153.87	99,000	Owned	62,000	40,000	63	0	0	1,361,000	0	Ralph Allen & Partners
Fallbrook[3]	27	B	809,424	608,341	8,000	76.04	75,878	Owned	125,205	50,000	52	40,000	0	444,424	325,000	San Diego Cty. Gen. Servs.
Moreno Valley	70	B	1,872,592	1,167,489	16,500	70.76	210,000	Owned	495,103	50,000	126	647,906	0	1,224,686	0	John F. Outcault
• Ontario	35	B	n/a	n/a	1,950	n/a	81,703	Leased	n/a	20,000	20	0	0	250,340	0	not reported
• San Diego	48	B	1,866,134	1,114,830	10,400	107.19	416,675	Owned	334,629	35,000	75	286,000	0	1,580,134	0	Wally Gordon
COLORADO																
Colorado Spgs.[4]	310	M	10,243,986	6,073,417	63,000	96.40	2,861,661	621,178	687,730	200,000	200	0	0	10,243,986	0	Muir & Associates
• Telluride[5]	2	M	550,000	375,000	4,200	89.28	50,000	75,000	50,000	25,000	50	0	0	475,000	75,000	Gibson & Reno
FLORIDA																
Holiday	50	B	593,400	438,400	10,000	43.84	125,000	Owned	30,000	40,000	60	200,000	0	393,400	0	Reynolds, Smith & Hills
GEORGIA																
Augusta	14	B	885,613	642,127	10,043	63.94	116,515	Owned	126,971	38,000	n/a	0	641,770	93,843	150,000	Nicholas Dickinson
Byron	7	B	273,858	201,118	4,600	43.72	48,000	Owned	24,740	14,000	28	0	171,429	50,050	56,834	Brittain, Thompson & Bray
• Cave Spring[6]	4	B	315,779	230,647	4,300	53.64	48,683	15,000	21,449	20,000	25	0	262,116	52,113	1,550	Buckley & Associates
• Cochran	11	M	580,854	407,708	7,200	56.63	80,854	25,000	67,292	50,000	42	95,854	306,667	30,000	148,333	W.S. Ledbetter
• Cornelia	15	B	652,658	438,675	7,500	58.49	113,515	47,693	52,775	40,000	60	0	519,977	104,000	28,681	Bailey Associates
Decatur[7]	n/a	B	105,000	103,553	200	517.77	0	0	1,447	5,000	0	52,500	0	0	52,500	Allegret & Associates
Gordon	6	B	271,343	187,210	3,200	58.50	61,000	Owned	23,133	11,000	51	0	242,743	28,600	0	Brittain, Thompson & Bray
Irwinton	6	B	271,343	187,209	3,200	58.50	54,000	Owned	30,134	11,000	51	0	242,743	28,600	0	Brittain, Thompson & Bray
Lakeland	6	B	333,638	251,461	4,500	55.88	40,379	20,000	21,798	17,586	39	0	289,797	23,841	20,000	Thomson & Associates
Lincolnton	7	M	382,429	261,621	5,000	52.32	42,411	50,000	28,397	18,200	37	0	289,286	93,143	0	Nicholas Dickinson
• Milledgeville	25	B	1,560,219	1,193,334	18,900	63.14	182,549	76,000	108,336	70,000	219	0	654,750	852,540	52,929	Holliday, Couch . . .
• Nashville	15	B	509,000	393,750	7,998	49.23	75,350	Owned	39,900	40,200	56	0	456,000	3,000	50,000	W. Conner Thomson
• Peachtree City	15	B	882,203	708,607	10,000	70.86	108,509	Owned	65,087	40,000	80	0	688,095	194,108	0	Lockwood Greene Engs.
• Pembroke	6	B	368,240	263,157	5,442	48.36	63,020	15,000	27,063	17,290	47	0	315,090	53,150	0	John A. Tuten & Associates
• Rossville	15	B	547,264	383,085	8,513	45.00	103,980	Owned	60,199	42,000	47	0	481,511	65,753	0	Kirkman Associates, Inc.
ILLINOIS																
• Warrenville[8]	10	M	1,037,390	719,318	9,986	72.03	144,595	Owned	173,477	18,984	67	0	250,000	787,390	0	Charles Newman & Assocs.
• Wauconda	12	M	1,218,200	1,030,900	10,000	103.09	65,000	25,300	97,000	90,000	48	0	530,000	688,200	0	O'Donnell, Wicklund . . .
INDIANA																
• Charlestown	38	M	1,200,000	900,000	14,600	61.64	90,000	30,000	180,000	125,000	95	0	0	1,200,000	0	Walker/Rosenbarger
Elkhart	20	B	394,238	241,000	4,096	58.84	78,370	55,000	19,868	21,000	32	0	0	338,238	56,000	Borger Jones Leedy
• Huntington[9]	20	M	1,857,242	1,431,890	18,348	78.04	178,287	74,550	172,515	85,000	123	235,000	0	1,590,292	31,950	J. Parke Randall
Mt. Vernon	20	M	2,793,000	1,471,800	22,000	66.90	663,260	270,000	387,940	143,000	47	0	0	2,850,000	0	John L. Luttig
• Noblesville	34	M	4,607,668	3,031,093	46,730	64.86	378,548	151,186	1,046,841	170,000	175	0	0	4,607,668	0	Everett I. Brown Co.
IOWA																
Cleghorn	1	M	131,780	92,080	3,168	29.01	12,200	20,000	7,500	12,000	21	45,000	0	46,780	40,000	Huntington Harmsen Ewing
LOUISIANA																
Covington	27	B	1,826,795	1,120,000	16,500	67.88	308,340	320,000	78,455	103,500	207	0	0	1,826,795	0	N–Y Associates
• Covington	3	B	207,210	137,500	2,000	68.75	33,829	25,000	10,881	12,500	20	0	0	207,210	0	Perez & Associates
• Jefferson	40	M	881,744	559,212	7,136	78.36	148,819	126,500	47,213	35,000	73	0	0	881,744	0	Harold E. Piqué Jr.
• Thibodaux[10]	16	M	528,000	343,000	13,000	26.38	0	185,000	0	35,000	46	0	0	0	528,000	Thomas W. Papazoglakis
MARYLAND																
• District Hgts.	100	B	2,106,608	1,688,204	24,000	85.60	152,352	213,918	52,134	100,000	100	0	0	2,106,608	0	Watkins–Puskar Partnership
• Havre de Grace	11	B	845,360	575,610	8,420	68.36	107,480	130,000	32,270	30,000	53	150,000	0	695,360	0	Paul Albright
• Severn	20	B	1,641,851	1,403,670	12,000	116.97	82,324	95,000	60,857	75,000	55	0	0	1,641,851	0	Lapicki/Smith

LIBRARY BUILDINGS 1987

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MASSACHUSETTS																
Hull	10	M	126,100	92,100	800	115.13	16,000	12,000	6,000	12,000	16	0	0	41,100	85,000	Gale Engineering
* Mashpee	7	M	604,000	480,000	5,200	92.31	84,000	Owned	40,000	25,000	44	100,000	0	500,000	4,000	Gaffney Architects
MINNESOTA																
Woodbury	20	BS	1,470,000	1,300,000	20,000	65.00	70,000	Owned	100,000	60,000	50	0	0	1,470,000	0	Shank, Kleineman, DeZeler
MISSISSIPPI																
* Pascagoula	142	MS	3,615,880	2,624,352	41,000	64.01	809,315	Owned	182,213	80,000	130	115,196	0	3,500,684	0	Slaughter & Allred
NEBRASKA																
* Gordon	10	M	177,612	140,000	3,000	46.67	20,937	4,000	12,675	12,000	30	0	66,634	0	110,978	Hoskins, Western . . .
NEVADA																
Indian Springs	1	B	60,000	31,000	1,200	25.83	29,000	Leased	0	5,000	16	0	0	60,000	0	Leo Berns
Mt. Charleston	1	B	406,921	257,672	2,600	99.10	37,839	75,000	36,410	5,400	16	0	186,386	220,535	0	Erol Hill Architect
* Overton	9	B	466,452	367,193	4,600	79.82	52,111	15,000	32,148	20,000	30	50,000	201,339	200,122	15,000	Tate & Snyder
Sandy Valley	1	B	60,000	31,000	1,200	25.83	29,000	Leased	0	5,000	16	0	0	60,000	0	Ken Pettitt
NEW JERSEY																
Manalapan	325	MS	7,500,000	6,732,000	85,000	79.20	300,000	Owned	468,000	700,000	260	0	0	7,500,000	0	Faridy,Thorne/Kaplan,Gaunt
NEW YORK																
Alden[11]	1	B	893,988	n/a	7,600	n/a	116,000	Owned	n/a	24,000	72	0	0	893,988	0	Milstein & Wittek
Bellport	21	M	2,014,148	1,247,611	12,000	103.97	204,879	249,442	312,216	73,000	87	0	18,119	1,965,104	30,925	Donald Denis
Buffalo	1	B	380,000	n/a	2,500	n/a	38,718	Owned	n/a	15,000	26	0	0	380,000	0	Cannon Design
Buffalo	24	B	1,068,946	767,253	7,862	97.59	136,297	111,688	53,708	24,000	58	70,000	112,649	886,297	0	Scaffidi & Moore
Hogansburg[12]	8	M	358,037	238,667	8,000	29.83	43,300	64,070	12,000	50,000	72	220,450	25,000	70,587	42,000	George W. Rosenvold
Little Neck	17	B	1,785,000	1,700,000	6,000	283.33	85,000	Owned	0	42,000	32	0	0	1,785,000	0	Abraham Geller & Assocs.
Norwood	2	M	287,770	217,857	3,800	57.33	24,049	25,168	20,696	25,000	n/a	0	13,416	274,354	0	Quentin Reutershan
* Rochester	17	B	382,256	328,991	3,800	86.58	37,357	Owned	15,908	n/a	n/a	0	127,050	255,206	0	David H. Wulff
Schenectady	15	B	218,218	179,218	3,000	59.74	12,000	27,000	0	20,000	50	0	61,418	156,800	0	Richard Bliss
Watkins Glen	8	M	529,000	440,000	5,180	84.94	34,000	5,000	50,000	25,000	53	0	156,030	6,000	366,970	Anne Hersh
NORTH CAROLINA																
Rockwell	13	B	496,608	374,212	7,000	53.46	45,613	19,780	30,003	13,000	30	150,000	34,771	190,102	94,735	James F. Kluttz
Winston Salem	25	B	795,000	660,000	9,800	67.35	70,000	Owned	65,000	40,000	50	0	0	795,000	0	Calloway, Johnson, & Moore
OHIO																
* Bluffton[13]	6	M	567,977	417,407	7,000	59.63	44,532	68,254	37,784	35,000	30	262,377	0	139,272	166,328	Bruce D. Wobser
Ottawa	33	M	1,340,469	1,144,726	19,501	58.70	111,810	Owned	83,933	65,000	103	0	0	1,320,469	20,000	Bruce D. Wobser
* Steubenville	54	B	1,493,864	966,776	9,060	106.71	105,235	322,500	99,353	33,000	117	199,792	0	1,053,072	241,000	Michael T. Tabeling
OKLAHOMA																
Coweta	7	M	195,000	145,000	3,500	41.43	25,000	20,000	5,000	17,000	32	50,000	15,000	130,000	0	Architectural Plus
* Midwest City	58	B	3,006,480	2,376,832	36,200	65.66	349,105	Leased	280,543	90,000	240	0	0	2,991,480	15,000	RGDC, Inc.
* Noble	5	B	502,985	331,765	5,200	63.80	51,008	72,007	48,205	20,000	30	125,000	28,362	234,293	115,330	Jack Nusbaum
* Tulsa	16	B	384,927	332,131	5,300	62.67	23,152	Owned	29,644	40,000	38	125,000	0	259,927	0	Matrix
OREGON																
* Manzanita	2	B	203,500	113,000	2,000	56.50	17,500	55,000	18,000	10,000	22	98,265	0	0	105,235	Tom Bender
Yachats	1	M	38,220	34,018	2,000	17.01	4,202	Owned	0	9,500	10	17,500	0	8,020	12,700	R.H. Bibler
TEXAS																
* Arlington	25	B	884,300	565,151	7,558	74.78	47,649	240,000	31,500	32,410	68	0	0	884,300	0	Jerry C. Davis
* Corrigan	6	M	445,389	299,849	5,400	55.53	31,400	65,000	49,140	50,000	35	0	100,000	100,000	245,389	Marsellos & Scott
Fort Worth[14]	130	B	2,780,562	2,320,968	25,000	92.84	244,759	55,949	158,886	150,000	108	0	0	2,780,562	0	CRSS, Inc.
* Fort Worth	120	B	2,760,000	1,986,149	26,385	75.28	350,000	59,306	364,545	150,000	150	0	0	2,760,000	0	CRS Sirrine
* Longview	94	M	3,926,063	2,267,021	35,000	64.77	1,107,733	223,750	327,559	140,503	111	0	0	2,818,330	1,107,733	Allen–Buie Partnership
New Caney	41	B	435,653	281,000	6,400	43.91	44,000	95,000	15,653	55,000	65	100,000	0	335,653	0	F.D. Freeman Associates
Palestine	46	M	1,071,882	827,984	15,664	52.86	99,926	15,000	128,972	60,000	65	200,000	0	200,000	671,882	Morgan, O'Neal . . .
Quanah	7	M	432,528	356,259	4,500	79.17	23,692	25,000	27,577	23,500	32	0	0	0	432,528	Albert Komatsu & Assocs.
UTAH																
Roosevelt	5	M	n/a	249,000	n/a	n/a	n/a	Owned	n/a	n/a	n/a	331,469	0	217,531	0	Richardson Associates
VIRGINIA																
* Bluefield	15	B	568,003	346,770	7,000	49.54	75,608	49,000	78,625	50,000	94	0	41,571	522,967	3,465	Echols-Sparger & Assocs.
* Burke[15]	60	B	3,472,900	2,615,189	25,000	104.61	430,601	180,793	246,317	125,000	211	0	0	3,472,900	0	Easen Cross
Christianburg	32	MS	918,854	771,845	15,100	51.12	60,700	34,000	52,309	71,000	100	219,128	13,700	668,026	18,000	Rogers & Reynolds
* Hampton	122	M	5,388,478	4,369,767	53,000	82.45	641,669	Owned	377,042	300,000	265	0	0	5,320,606	67,872	Rancorn Wildman . . .
Haymarket	7	B	222,076	179,076	2,000	89.54	35,000	Leased	8,000	12,500	5	0	0	222,076	0	Parker/Reinhart Assocs.
Manassas	7	B	214,076	171,076	2,000	85.54	35,000	Leased	8,000	12,500	5	0	0	214,076	0	Parker/Reinhart Assocs.
Monterey	3	M	138,589	116,089	3,200	36.28	8,000	14,000	500	15,000	20	0	0	0	138,589	not reported
WASHINGTON																
Mill Creek	20	B	583,651	464,043	3,800	122.12	41,853	Owned	77,755	21,800	28	182,984	0	390,667	10,000	Elaine LaTourell
Sultan	10	M	130,000	90,000	2,438	36.92	26,500	Owned	13,500	12,900	22	130,000	0	0	0	Lewis ● Nelson Assocs.
WEST VIRGINIA																
White Sulphur Spgs.	3	M	455,824	374,907	4,600	81.50	40,585	Owned	40,332	20,000	24	144,940	3,868	100,000	207,016	Wilson & Goff Architects
WISCONSIN																
* Hillsboro	4	M	216,000	175,000	3,440	50.87	31,000	Owned	10,000	14,000	34	68,000	0	106,000	42,000	Richard Thern
* Menomonie	13	M	1,311,796	1,009,892	15,000	67.33	142,852	70,000	89,052	40,000	85	125,000	0	1,186,796	0	John H. Howe & Assocs.
* Oconomowoc	24	M	1,900,000	1,500,000	24,000	62.50	250,000	Owned	150,000	90,000	70	0	0	1,800,000	100,000	Durant Architects
Omro	3	M	204,151	161,416	3,958	40.78	4,215	14,727	23,793	10,000	20	44,737	0	134,414	25,000	Yarbro-Kempinger
WYOMING																
* Baggs	2	B	290,773	223,505	2,990	74.75	37,945	3,900	25,423	9,500	12	0	0	286,873	3,900	Dehnert/Richardson/Assocs.
Rock Springs	25	B	2,162,489	1,868,825	28,000	66.74	243,598	Owned	50,066	75,000	120	0	0	2,162,489	0	George Hamkopis

LIBRARY BUILDINGS 1987

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ALABAMA																
Autaugaville	2	B	$5,000	$2,600	1,260	$2.06	$1,200	Leased	$1,200	n/a	4	0	0	$3,000	$2,000	not reported
* Eufaula	25	M	81,751	76,342	6,910	11.04	n/a	Owned	5,409	13,000	15	$36,508	0	27,033	18,210	Taylor/Hamrick
Hueytown	17	M	130,000	99,750	2,000	49.88	22,250	Owned	8,000	25,000	22	0	$67,164	62,836	0	Walter Anderson
* Monroeville	25	M	226,750	184,400	4,740	38.90	30,600	Owned	11,750	1,500	50	75,000	0	0	151,750	Raymond A. Broadus
* Oneonta	37	M	50,095	37,250	904	41.21	7,882	Owned	4,963	5,500	0	25,000	0	18,425	6,670	William W. Arnold
CALIFORNIA																
Glendale	n/a	B	1,719,300	950,000	11,200	84.82	269,700	Owned	330,000	60,000	95	283,800	0	1,435,500	0	Charles Walton & Assocs.
Inverness	1	B	250,350	154,000	n/a	n/a	33,650	62,700	n/a	4,000	24	6,350	0	39,000	215,000	Theodore T. Boutmy
Livermore	5	B	175,500	150,000	2,400	62.50	25,500	Owned	n/a	12,000	16	0	0	150,500	25,000	Associated Professions
Pasadena	128	M	2,075,000	1,303,765	8,000	162.97	609,362	Owned	161,873	200,000	n/a	574,400	0	1,500,600	0	Taylor & Assocs.
Salinas	n/a	S	68,500	61,000	9,000	6.78	2,500	Owned	5,000	180,000	8	0	0	68,500	0	Belli/Christensen
Tracy	33	B	1,258,600	1,019,612	16,911	60.29	155,884	Owned	173,104	80,000	125	655,000	0	531,600	162,000	Morris & Wenell, Inc.
COLORADO																
Yampa	1	M	34,183	26,738	900	29.70	730	0	137	5000	30	11,308	0	22,876	0	Rex Peterson
DELAWARE																
Dover	25	M	714,810	618,785	17,090	36.20	34,830	Owned	61,195	60,000	117	287,446	0	382,338	45,026	Calvin Clendaniel
FLORIDA																
Ormond Beach	45	M	286,289	206,758	5,362	38.56	61,031	Owned	18,500	70,000	95	0	100,000	167,789	0	Gerken, Upham, Smith, Inc.
Tarpon Springs	25	M	397,407	335,884	10,030	33.49	41,523	Owned	20,000	40,000	85	0	75,000	177,092	131,100	Edward C. Hoffman
GEORGIA																
* Commerce	7	B	437,067	370,000	9,000	41.11	26,000	Owned	41,067	50,200	800	0	393,360	43,707	0	Jacobs, Inc.
* Decatur	96	B	124,000	112,840	7,276	15.51	0	Owned	11,160	45,000	56	62,000	0	62,000	0	Christian/Foley
* Hampton	3	B	210,602	181,934	2,462	73.90	16,240	Owned	12,428	25,000	28	0	180,000	1,000	29,602	Spangler & Manley
* Lithonia	5	B	95,000	n/a	2,400	n/a	95,000	0	n/a	22,250	25	0	0	95,000	0	not reported
* Ocilla	10	B	410,000	310,200	7,080	43.81	67,276	Owned	32,524	26,100	48	0	369,000	3,000	38,000	W. Conner Thomson
* Richmond Hill	6	B	267,987	184,777	5,528	33.43	45,881	12,000	25,329	17,290	47	0	227,147	40,840	0	John A. Tutan
* Watkinsville	19	B	530,467	371,903	12,100	30.74	95,138	Owned	63,426	35,000	105	0	469,033	0	61,434	L. Miles Sheffer
IDAHO																
* Ketchum	25	M	642,041	522,000	8,500	61.41	54,337	Owned	65,704	n/a	n/a	0	0	0	642,041	Dates Fryberger
ILLINOIS																
* Gurnee	26	M	813,437	747,206	21,015	35.55	6,500	Owned	59,731	101,000	224	0	250,000	563,437	0	Thomas F. Bleck
* Hillside	9	M	243,510	213,825	4,886	43.76	0	Owned	29,685	n/a	n/a	0	94,164	149,346	0	James C. Jankowski
* Jerseyville	8	M	600,000	450,200	10,100	44.57	71,000	Owned	78,800	35,000	45	200,022	208,480	154,000	10,000	Watwood & Heavener, Inc.
* Minonk	2	M	120,613	70,005	7,179	9.75	24,000	8,500	18,108	35,000	28	0	48,602	0	48,602	Paul Young
* Palos Hills	30	M	692,194	530,871	6,191	85.75	31,167	Owned	130,156	24,908	127	0	48,275	643,919	0	LaRoi Architects Ltd.
Riverside	9	M	1,800,000	1,511,000	16,596	91.04	47,000	Owned	242,000	80,000	92	0	0	1,755,000	45,000	Frye Gillan Molinaro, Ltd.
Schaumburg	120	M	4,784,877	3,804,101	80,000	47.55	427,876	Owned	552,900	350,000	460	0	0	4,784,877	0	O'Donnell Wicklund . . .
* Woodridge	25	M	86,863	77,943	n/a	n/a	0	0	8,920	n/a	n/a	0	34,745	52,118	0	Cody Braun
INDIANA																
* Scottsburg	20	M	678,957	537,863	8,062	66.71	64,613	Owned	76,481	53,500	62	265,000	0	344,767	69,190	J. Parke Randall
IOWA																
Hampton	5	M	183,245	168,516	10,000	16.85	0	Owned	14,729	n/a	n/a	93,979	0	57,250	38,016	Neumon Monson Architects
Nashua	2	M	227,407	180,000	3,200	56.25	32,407	Owned	15,000	15,500	18	112,100	0	2,407	112,500	Neumon Monson Architects
KANSAS																
* Leavenworth	57	M	2,302,800	1,400,000	25,000	56.00	255,800	515,000	132,000	100,000	125	10,000	0	2,292,800	0	Peters, Kubota & Glenn
KENTUCKY																
Lebanon Junction	4	B	48,000	6,000	1,200	5.00	5,000	37,000	0	8,000	15	0	0	39,000	9,000	none
LOUISIANA																
Abita Springs	3	B	26,394	23,735	1,600	14.83	0	Owned	2,659	8,000	25	0	0	26,394	0	Ashley Inabnet
Bush	2	B	26,394	23,735	1,600	14.83	0	0	2,659	12,500	n/a	0	0	21,600	0	Ashley Inabnet
Lacombe	6	B	25,152	22,493	1,600	14.06	0	Owned	2,659	8,000	25	0	0	25,152	0	Perez Assocs.
* Madisonville	3	B	219,378	189,479	3,000	63.16	24,468	145,000	16,432	12,500	0	0	0	219,378	0	Perez Assocs.
* Mandeville	13	B	493,918	390,600	5,000	78.12	76,000	0	27,318	38,200	71	0	0	442,800	0	Ronald Kilcrease
* Pearl River	2	B	240,243	137,500	2,000	68.75	25,362	66,500	10,881	12,500	20	0	0	204,000	0	Ashley Inabnet
MARYLAND																
* Annapolis	38	B	514,078	477,952	2,532	188.76	10,000	0	26,126	n/a	n/a	0	0	514,078	0	Fourth St. Design Studio
* Ellicott City	50	B	3,010,000	2,325,000	23,000	101.11	294,000	79,000	312,000	125,000	125	0	0	3,101,000	0	Bernard Madison
MASSACHUSETTS																
* Bourne	15	M	1,019,000	794,000	15,875	50.01	130,000	0	95,000	75,000	100	165,000	55,000	669,000	130,000	A. Anthony Tappe & Assocs.
Salem	38	M	1,751,305	1,712,805	11,900	143.93	0	Owned	38,500	185,000	127	253,973	0	1,497,332	0	R. Farley & J. Ballou
MICHIGAN																
Romeo	16	M	90,450	63,176	5,800	10.89	19,803	Owned	7,471	50,000	53	28,575	0	61,875	0	Merritt & McCallum
MINNESOTA																
Coon Rapids	30	B	758,280	568,091	10,500	54.10	102,345	Owned	87,844	48,000	80	0	0	758,280	0	Glen Lindberg
* Stillwater	20	M	860,674	626,248	13,136	46.67	95,000	Owned	139,426	42,000	85	0	0	816,708	78,831	J. Scherer & B. Petit
MISSISSIPPI																
* Okolona	3	B	175,000	144,310	2,530	57.03	20,383	Owned	10,307	10,200	28	75,000	25,000	75,000	0	Jim Johnson
MISSOURI																
Hannibal	38	M	718,779	637,434	15,426	41.32	26,985	Owned	54,360	100,000	61	69,000	0	199,799	450,000	Jim Krewson

Southside Library, Winston-Salem, N.C.

Glendale Public Library, Calif.

THOMAS HYSELL

Stillwater Public Library, Minn.

Riverside Branch Library, Buffalo, N.Y.

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MONTANA																
Ennis	1	M	79,678	57,900	1,500	38.60	21,778	Owned	5,500	10,000	20	28,195	0	27,488	26,147	K. Don Taylor
* Superior	4	M	8,870	8,413	n/a	n/a	0	Owned	457	n/a	n/a	6,270	0	2,600	0	Crossman, Whitney, Griffin
NEVADA																
* Las Vegas	135	M	1,620,436	1,002,019	19,000	52.74	105,042	400,000	113,374	202,000	265	0	754,943	865,493	0	Robert A. Fielden
NEW HAMPSHIRE																
Amherst	9	M	1,100,000	859,000	13,270	64.73	105,000	30,000	106,000	50,000	75	36,500	0	900,000	163,500	Frank Adams
Milford	11	M	1,075,000	873,000	13,500	64.67	125,000	Owned	77,000	55,000	65	50,000	0	950,000	75,000	John Jordon
NEW MEXICO																
* Alamogordo	45	M	871,042	745,948	20,764	35.93	60,303	Owned	64,792	100,000	115	66,746	0	795,621	8,675	John Reed
Eunice	3	M	125,685	117,663	4,683	25.12	0	Owned	8022	35,000	45	57,000	0	68,685	0	Killian & Assoc.
* Hobbs	35	M	2,100,000	1,700,000	40,500	41.97	100,000	Owned	300,000	180,000	130	0	0	2,100,000	0	W.T. Harris & Assocs.
* Santa Fe	45	M	4,012,531	3,013,960	35,900	83.95	573,535	Owned	425,036	125,000	177	66,746	0	3,927,250	18,535	Kestutis Germanas, Inc.
NEW YORK																
Akron	7	M	20,000	19,400	3,988	4.86	0	Owned	600	14,000	46	0	10,000	10,000	0	Wendel Engineers
Armonk	9	M	855,480	563,480	11,318	49.78	250,000	Owned	42,000	45,000	60	0	57,387	798,093	0	Fairfield Design Assocs.
Beacon	21	M	50,000	45,000	7,600	5.92	5,000	Owned	0	25,000	64	0	10,500	39,500	0	Battoglia Assocs.
Bohemia	40	M	435,553	357,553	4,000	89.38	0	Owned	78,000	125,000	100	0	18,119	417,434	0	Ronald Benedict
Boston	7	M	68,424	66,424	1,450	45.81	0	Owned	2,000	12,000	35	0	28,500	39,924	0	Kenneth Selden
Brooklyn	27	B	226,970	151,187	23,250	6.50	59,983	Owned	15,800	39,500	65	0	90,000	136,970	0	Robert L. Wilson
Brooklyn	30	B	399,867	312,400	9,000	34.71	63,467	Owned	24,000	22,000	65	0	74,000	325,867	0	Wallace Kaminsky
Brooklyn	30	B	110,370	71,353	14,075	5.06	32,517	Owned	6,500	22,500	70	0	38,000	72,370	0	Misra & Assocs.
Brooklyn	23	B	115,618	72,008	18,615	3.86	35,618	Owned	8,000	53,000	55	0	11,246	104,372	0	Bogen, Johnson, Lau & Jenal
Cheektowaga[11]	109	M	16,870	11,612	14,827	.78	5,258	Owned	0	50,000	80	0	6,000	9,895	975	not reported
Cohoes	18	M	897,000	737,000	13,500	54.59	50,000	Owned	110,000	40,000	65	0	24,767	872,233	0	Feibes, Schmitt & Pitts...
Collins	5	M	34,125	33,445	2,880	11.61	0	Owned	680	12,000	25	10,000	15,860	8,265	0	Carol C. Siracuse
Cortland	27	M	61,135	59,335	17,200	3.45	0	Owned	1,800	93,000	53	0	24,453	36,682	0	Karl H. Wendt
Deer Park	27	M	392,599	342,599	3,760	91.11	10,000	Owned	40,000	95,000	75	0	18,119	374,480	0	Raymond F. Fellman
East Meadow	51	M	1,208,201	956,402	11,140	85.85	139,799	Owned	112,000	300,000	207	0	57,000	1,151,201	0	Schsardt & Fullan
Flushing	33	B	487,014	364,614	8,220	44.35	98,400	Owned	24,000	70,000	90	0	62,110	424,904	0	David Mammina
Flushing	113	B	306,600	294,600	17,100	17.22	0	Owned	12,000	113,000	170	0	116,766	189,834	0	Laurence Werfel
Freeport	35	M	870,000	723,000	54,000	13.38	17,000	Owned	130,000	250,000	120	0	10,708	859,292	0	Bentel & Bentel
Fulton	13	M	57,000	55,600	6,500	8.55	0	Owned	1,400	55,000	65	0	25,300	31,700	0	Hueber-Hares-Glavin
Greenlawn	21	M	436,267	321,057	30,810	10.42	97,760	Owned	17,450	105,000	85	0	17,500	418,767	0	Allen & Grant
Hicksville	41	M	283,204	223,188	2,780	80.28	29,331	Owned	30,685	303,000	115	0	30,984	252,220	0	Bentel & Bentel

LIBRARY BUILDINGS 1987

Community	Pop. in th	Code	Project Cost	Const. Cost	Gross Sq. Ft.	Sq.Ft. Cost	Equip. Cost	Site Cost	Other Costs	Volumes	Reader Seats	Federal Funds	State Funds	Local Funds	Gift Funds	Architect
Irondequoit	57	B	319,202	297,202	6,060	49.04	0	Owned	22,000	140,000	86	0	19,189	300,013	0	Passero Assocs.
Ithaca	42	M	360,680	355,680	42,392	8.39	0	Owned	5,000	75,000	120	0	25,253	335,427	0	William Downing Assocs.
Keene Valley	1	M	55,550	49,850	3,608	13.81	3,000	Owned	2,700	17,000	13	0	20,000	35,550	0	Ronald H. DeLair
Lancaster	30	M	57,905	47,000	17,512	2.68	0	Owned	10,905	60,000	85	0	10,406	47,499	0	Wilson, Klaes ...
Laurelton	26	B	174,000	131,600	8,000	16.45	37,200	Owned	5,200	65,000	50	0	69,563	104,437	0	David Mammina
Levittown	50	M	115,212	107,374	34,850	3.08	0	Owned	7,838	305,000	110	50,000	12,825	52,387	0	Lee A. Sagistano
Locust Valley	8	M	23,000	20,000	12,000	1.66	0	Owned	3,000	55,000	35	0	7,918	15,082	0	Bentel & Bentel
Long Beach	39	M	1,332,000	1,210,000	16,000	75.63	32,000	Owned	90,000	100,000	47	0	32,000	1,300,000	0	Daniel Langer
Mamaroneck	17	M	847,950	695,000	7,100	97.88	40,900	15,500	96,550	95,000	95	0	40,000	807,950	0	Scofield/Colgan ...
Mattydale	7	M	117,689	110,589	2,074	53.32	0	Owned	7,100	20,000	40	0	47,560	70,129	0	George Swatt
New Hyde Park	9	M	25,000	23,650	5,500	4.30	0	Owned	1,350	55,000	46	0	6,933	18,067	0	Michael J. Squicciarin
North Tonawanda	36	M	89,786	86,286	24,000	3.59	0	Owned	3,500	120,000	110	0	14,000	75,786	0	Thomas R. Moscati
Oceanside	38	M	257,367	224,367	16,129	13.91	15,000	Owned	18,000	133,000	96	0	15,219	242,148	0	Schaardt & Fullan
Ogdensburg	12	M	38,800	38,050	16,000	2.37	0	Owned	750	40,000	50	0	19,400	19,400	0	John Teitsch
Olean	20	M	13,039	12,779	19,440	.65	0	Owned	260	90,000	86	0	8,850	4,189	0	Preston R. Abbey
Olean	20	M	11,872	7,238	432	17.00	3,995	Owned	639	110,000	135	0	5,000	6,872	0	Preston R. Abbey
Patterson	1	M	30,000	28,500	1,625	17.53	0	Owned	1,500	12,500	25	0	9,000	21,000	0	William I. Clark
Penfield[17]	27	M	1,065,935	841,000	18,400	45.70	152,670	Owned	72,265	73,600	95	0	60,100	1,005,835	0	MRS Group
Potsdam	10	M	54,056	52,976	9,472	5.59	0	Owned	1,080	50,000	45	0	18,000	36,056	0	Crawford & Staarns
Queens Village	34	B	499,696	358,805	11,700	30.67	98,018	Owned	42,873	97,500	70	0	165,626	334,070	0	Werfel Assocs.
Richfield Springs	1	M	27,350	26,050	3,100	8.40	0	Owned	1,300	12,400	20	0	12,926	14,424	0	James Jordan
Schenectady	21	B	56,000	56,000	3,946	14.19	0	Owned	0	23,500	30	0	25,793	30,207	0	Richard Bliss
Sloatsburg	3	M	155,369	131,369	11,400	11.52	11,000	Owned	13,000	20,000	26	0	36,500	118,869	0	Garfinkel & Gerecke
Spring Valley	80	M	4,415,720	3,387,332	30,000	113.00	559,404	5,000	463,984	300,000	250	0	8,000	4,407,720	0	SMS Architects, Inc.
Syracuse	25	B	117,592	110,592	12,400	8.91	0	Owned	7,000	25,000	75	0	54,545	63,047	0	Quinlivan, Pierik & Krause
Syracuse	24	B	75,000	65,000	15,700	4.14	0	Owned	10,000	35,000	55	0	36,363	38,637	0	Quinlivan, Pierik & Krause
Troy	56	M	81,000	73,150	16,470	4.44	5,150	Owned	2,700	115,000	95	0	25,126	55,874	0	Barbara Nelson
Watertown	341	S	72,726	69,126	17,800	3.88	0	Owned	3,600	n/a	n/a	0	30,000	42,726	0	Yaussi & Aceti
Westfield	5	M	36,339	35,976	10,000	3.59	0	Owned	363	35,000	30	0	5,750	30,589	0	Carol C. Siracuse
NORTH CAROLINA																
Bessemer City[18]	10	B	178,865	156,135	3,034	51.46	6,085	Owned	16,645	25,000	20	0	0	178,865	0	Guy A. Yeargin
Dallas	10	B	215,848	190,064	2,970	63.99	7,076	Owned	18,708	25,000	20	0	0	215,848	0	Guy A. Yeargin
Pittsboro	15	B	189,471	172,392	2,048	84.18	9,079	Owned	8,000	32,000	27	30,000	0	0	159,471	Hackney, Sears & Assocs.
Rutherfordton	55	M	144,664	120,987	5,200	23.27	7,593	Owned	16,084	30,000	28	0	15,000	5,000	157,795	Jim Martin
OHIO																
Barberton	30	M	2,052,380	1,666,362	27,922	59.67	91,817	Owned	294,201	120,000	142	0	0	2,200,000	0	William D. Koster
Columbus	35	M	360,476	296,884	2,800	106	38,450	Owned	25,142	35,000	44	50,000	0	270,913	39,563	Feinknopf, Macioce ...
Pleasant Hill	3	B	152,000	125,000	2,000	62.50	0	Owned	27,000	12,000	12	73,000	0	79,000	0	not reported
Upper Arlington	893	M	3,126,045	2,549,640	52,000	49.03	389,867	Leased	186,538	268,000	295	0	0	3,126,045	0	Trott & Bean Architects
OKLAHOMA																
Moore[19]	43	B	1,827,572	1,544,170	29,382	52.55	142,329	Owned	141,073	100,000	225	0	0	1,827,572	0	Graves, Boynton, Williams
Pryor	9	M	266,998	214,800	4,300	49.95	52,198	Owned	0	7,000	22	18,000	0	0	248,998	Olsen-Coffey
OREGON																
Portland[20]	24	B	14,652	11,602	2,000	5.80	3,050	Owned	0	10,000	26	0	0	12,652	2,000	none
RHODE ISLAND																
Westerly	19	M	22,426	22,426	200	112.00	0	Owned	0	125,000	58	11,213	0	11,213	0	not reported
TEXAS																
Ballinger[21]	7	M	471,340	443,715	9,000	49.30	0	Owned	27,625	10,000	20	0	0	53,500	417,840	Jack E. Meek
Howe	3	M	40,123	13,000	2,091	6.22	16,956	10,167	0	25,000	33	29,623	0	0	10,500	Bryan Thurston
McKinney[22]	27	M	1,577,500	930,000	20,000	46.50	108,000	465,000	74,500	60,000	112	200,000	0	1,377,500	0	Harvey Moore
Palestine[23]	41	M	904,933	704,933	15,664	45.00	130,000	Owned	70,000	60,000	50	200,000	0	200,000	504,933	Jerry Hill
UTAH																
Cedar City	19	M	1,847	1,847	n/a	n/a	0	Owned	0	44,000	n/a	950	0	950	0	not reported
Ephraim	3	M	1,390	1,390	n/a	n/a	0	Owned	0	15,000	n/a	695	0	695	0	not reported
Kaysville	12	M	269,234	213,968	6,020	36.00	23,504	Owned	31,762	40,000	60	0	0	103,483	165,751	Babcock Pace & Assocs.
Monroe	2	M	1,900	1,900	n/a	n/a	0	Owned	0	9,000	n/a	950	0	950	0	not reported
Mt. Pleasant	7	M	1,970	1,970	n/a	n/a	0	Owned	0	8,100	n/a	970	0	1,000	0	not reported
Price	10	M	1,950	1,950	n/a	n/a	0	Owned	0	25,000	n/a	950	0	1,000	0	not reported
Richfield	10	M	1,950	1,950	n/a	n/a	0	Owned	0	20,000	n/a	1,000	0	950	0	not reported
VERMONT																
Brattleboro	49	M	38,652	35,592	630	56.50	0	Owned	3,060	110,000	50	0	10,800	27,852	0	David Ryan
VIRGINIA																
Martinsville	94	MS	1,632,069	1,162,812	24,950	46.60	116,990	136,000	216,267	246,000	173	0	0	136,000	1,496,069	John Tymoff
Newport News	20	B	149,600	134,500	10,000	13.45	3,800	Owned	11,300	65,000	26	0	0	145,800	3,800	none
Portsmouth	18	B	72,000	66,283	936	70.81	0	Owned	5,717	30,000	51	0	0	72,000	0	none
WASHINGTON																
Colville[24]	5	M	372,840	282,000	4,810	59.00	30,000	Owned	60,840	30,000	35	186,420	0	186,420	0	Ernest K. Robeson
Longview[25]	29	M	55,436	42,674	750	56.90	1,500	Owned	11,262	130,000	150	39,050	0	4,886	11,500	Gary Slyter ...
Monroe	15	M	230,000	171,750	4,712	36.45	35,000	Owned	23,250	23,700	50	110,000	0	90,000	30,000	Lewis-Nelson Assocs.
Seattle	48	B	663,000	530,000	5,500	96.36	68,000	Owned	65,000	30,750	32	0	0	595,000	68,000	Cardwell/Thomas Assoc.
Spokane	60	B	1,344,674	1,106,885	24,576	45.04	146,250	Owned	91,539	100,000	85	0	0	1,340,969	3,705	Warren C. Heylman ...
Spokane	35	B	28,039	26,405	349	75.66	0	Owned	1,634	13,700	20	14,019	0	14,020	0	Warren C. Heylman ...
WISCONSIN																
LaCrosse	1	M	25,840	7,840	1,030	7.61	0	18,000	0	8,000	20	12,500	0	13,340	0	Keith Reinert
Roberts[26]	2	M	65,000	58,600	750	78.13	4,000	Owned	2,400	10,000	15	0	0	32,000	33,000	Bill Simkins
Saukville[27]	3	M	130,694	13,576	4,399	3.08	10,880	96,500	9,738	12,000	19	0	0	129,701	993	Earlich Genson, Inc.
WYOMING																
Afton	7	B	223,633	195,945	5,288	37.05	0	Owned	27,688	30,000	45	37,142	0	186,491	0	Bruce Hawtin
Thermopolis	5	M	94,812	65,747	861	76.36	0	Owned	29,066	48,000	90	0	46,000	48,812	0	Albert Lambiase

Buildings Not Previously Reported

Community	Pop. in M	Code	Project Cost	Const. Cost	Gross Sq. Ft.	Sq.Ft. Cost	Equip. Cost	Site Cost	Other Costs	Volumes	Reader Seats	Federal Funds	State Funds	Local Funds	Gift Funds	Architect
Savannah, GA (1986)	257	M	$121,457	$102,486	n/a	n/a	$8,571	Owned	$10,400	n/a	n/a	$108,957	0	$12,500	0	Helfrich, Grantham . . .
Holyoke, MA (1986)	44	M	306,947	275,258	2,868	$95.97	0	Owned	31,689	n/a	n/a	102,550	0	201,219	$3,178	Timothy Murphy
Howell Twnshp., NJ (1986)	31	B	1,348,971	1,222,000	11,200	109.11	48,971	Owned	78,000	45,000	78	0	0	1,348,971	0	Eggars–Bryant Gould
Corpus Christi, TX (1985)	281	MS	5,672,000	4,072,000	79,000	51.54	540,000	735,000	325,000	260,000	280	0	0	5,200,000	472,000	Morris Archs ; Wisznia

	Fiscal 1982	Fiscal 1983	Fiscal 1984	Fiscal 1985	Fiscal 1986	Fiscal 1987
Number of new bldgs.	92	54	48	99	71	101
Number of ARRs[1]	76	42	63	125	120	148
Sq. ft. new bldgs.	2,058,429	835,211	800,252	852,831	1,141,957	1,370,479
Sq. ft. ARRs	737,707	369,351	523,963	1,227,063	1,189,319	1,554,393
NEW BLDGS.						
Construction cost	$107,890,141	$48,761,130	$64,370,118	$52,799,143	$73,092,317	$101,016,870
Equipment cost	14,580,451	6,426,618	6,451,298	6,585,913	9,799,996	17,958,318
Site cost	3,556,109	2,741,248	1,622,534	4,085,764	4,211,461	5,047,659
Other costs	13,219,164	6,018,787	6,397,740	5,728,714	10,869,097	12,096,087
Total—Project cost	141,893,227	63,947,783	78,841,690	70,583,649	97,972,871	136,952,501
ARRs—Project cost	38,147,095	18,769,475	30,762,934	69,256,835	59,634,921	78,504,854
NEW & ARR PROJECT COST	$180,040,322	$82,717,258	$109,604,624	$139,840,484	$157,607,792	$215,457,355
FUND SOURCES						
Federal, new bldgs.	$11,922,851	$4,401,647	$2,274,957	$9,803,398	$6,367,559	$5,757,098
Federal, ARRs	5,497,522	1,046,490	2,227,355	8,086,819	4,753,052	4,677,400
Federal, total	$17,420,373	$5,448,137	$4,502,312	$17,890,217	$11,120,611	$10,434,498
State, new bldgs.	$23,532,309	$8,175,330	$4,340,803	$4,139,433	$1,863,277	$7,710,681
State, ARRs	1,049,493	3,160,159	2,784,153	1,607,519	7,054,676	5,060,877
State, total	$24,581,802	$11,335,489	$7,124,956	$5,746,952	$8,917,953	$12,771,558
Local, new bldgs	$87,920,271	$47,544,033	$71,043,181	$47,914,637	$73,997,971	$117,135,870
Local, ARRs	24,626,721	10,640,891	22,921,592	49,096,264	42,971,936	62,839,510
Local, total	$112,546,992	$58,184,924	$93,964,773	$97,010,901	$116,969,907	$179,975,380
Gift, new bldgs.	$20,143,884	$3,957,736	$1,169,101	$8,766,333	$15,771,620	$7,182,656
Gift, ARRs	2,736,493	3,171,935	2,838,892	10,490,099	4,982,621	6,165,722
Gift, total	$22,880,377	$7,129,671	$4,007,993	$19,256,432	$20,754,241	$13,348,378
TOTAL FUNDS USED	$175,995,668	$82,098,221	$109,600,034	$139,904,502	$157,762,712	$216,529,814

[1] Additions, Remodelings, and Renovations

1. Three-story atrium through center.
2. Round building, encased in glass; tension-ring structural system creates open plan without internal obstructions.
3. Rebuilt after arson fire in April 1985.
4. Honor award interior: Southern Colorado Chapter of American Institute of Architects.
5. Connection to historic stone jail that previously housed library.
6. Section to serve the hearing impaired; Georgia School for the Deaf also in Cave Spring.
7. Located in rail station, first rapid transit library in country.
8. Natural wooded site; extention of prairie surroundings leading to Illinois Prairie Path.
9. Special Indiana History room.
10. Project totally funded by gifts & donations; beamed cathedral ceiling with skylight.
11. Library center of correctional facility
12. Mohawk Reservation library; houses museum and Native American collection.
13. Citizens raised over $100,000 to match LSCA grant.
14. First regional library.
15. Winner, Exceptional Design Award of Office of Comprehensive Planning and Architectural Review Board.
16. Converted raw warehouse space into public space.
17. Remodeled school.
18. Branch originally built in 1960 as square brick box with only 1,883 sq. ft.
19. Has indoor garden atrium.
20. Changed branch library from traditional to bookstore arrangement.
21. 1909 building, on National Register of Historic Places.
22. Renovated bank.
23. Seventy-year-old school building is central core of new library.
24. Building originally built in 1932; has great historical significance.
25. Remodeled to provide handicapped access to existing structure.
26. Library, which began in 1975, was named for teacher who for 30 years taught Roberts community to read.
27. Former grade school built in 1925.

Alexandrian PL, Mt. Vernon, Ind.

RAY STREIB, "MESA INDEPENDENT"

Dobson Branch Library, Mesa, Ariz.

Schaumburg Township Library, Ill.

Manzanita Branch Library, Oreg.

ARCHITECTS

Abbey, Preston R. Architects, Inc., 29 South Ave., Bradford, PA 16701

Adams, Frank of Stahl Associates, Boston, MA

Albright, Paul of Frederick Ward Associates, 5 S. Main St., Bel Air, MD 21014

Allegret & Associates, 5818 Musket Lane, Stone Mountain, GA 30087

Allen & Grant, 31 Broadway, Greenlawn, NY 11740

Allen–Buie Partnership, 1000 Pegues Pl., Longview, TX 75601

Allen, Ralph & Partners, AIA, 520 N. Main St., Suite 200, Santa Ana, CA 92701

Anderton, Walter, 889 Shades Crest Rd., Birmingham, AL 35226

The Architects Collaborative, TAC, 46 Brattle St., Cambridge, MA 02138

Architectural Plus, 5350 E. 46th St., Tulsa, OK 74135

Architecture Six, Inc., 316 Iris St., Lake Charles, LA 70601

Arnold, William W., 2104 14th Ave. S., Birmingham, AL 35205

Associated Professions, 4200 East Ave., Livermore, GA 94550

Babcock Pace & Associates, 52 Exchange Place, Salt Lake City, UT 84111

Bailey Associates, Hunt Tower, Gainesville, GA 30501

Battoglia Associates, Old Rte. 9, Fishkill, NY 12524

Belli/Christensen AIA, 40 Central Ave., Salinas, CA 93901

Bender, Tom, Architect, 38755 Reed Rd., Nehalem, OR 97131

Benedict, Ronald, Arktek Associates, 200 1315 Ave., Ronkonkoma, NY 11779

Bentel & Bentel, 22 Buckram Rd., Locust Valley, NY 11560

Bibler, R.H., PO Box 218, Yachats, OR 97498

Bleck, Thomas F., 1321 Glen Rock Ave., Waukegan, IL. 60085

Bliss, Richard, Department of Engineering & Public Works, Schenectady County, Schenectady, NY 12307

Bogen, Johnson, Lau & Jenal, 1225 Franklin Ave., Garden City, NY 11530

Boney Architects, Inc., 102 S. Fifth St., Wilmington, NC 28401

Borger Jones Leedy, Architects, 131 E. Franklin St., Elkhart, IN 46516

Borns, Leo, 1009 S. Casino Center Blvd., Las Vegas, NV 89101

Boutmy, Theodore T., Inverness, CA

Bower, J.A., 125 Valleyview NW, Canton, OH 44708

Brandenburger, Don, AIA & Hal Murphy of Brandenburger Associates, 251 Kearny St., 801, San Francisco, CA 94108

Braun, Cody, 4513 Lincoln Ave., Lisle, IL 60532

Brittain, Thompson & Bray, 609 Cherry St., Macon, GA 31201

Broadus, Raymond A., 4223 St. Stephens Rd., Eight Mile, AL 36613

Brown, Everett I., Co., Inc., Indianapolis, IN 46204

Buckley, James W. & Associates, Mitchell Bldg., Box 727, Swainsboro, GA 30401

Calloway, Johnson, & Moore, 635 W. Fourth St., Winston-Salem, NC 27101

Cannon Design, 2170 Whitehaven Rd., Grand Island, NY 14072

Cardwell/Thomas Associates, 1221 Second Ave., Seattle, WA 98104

Carter, John A., 7 Concord St., Nashua, NH 03060

Christian/Foley, Suite 250, Bldg. 1480, 1355 Terrell Mill Rd., Marietta, GA 30067

Clark, William I., Patterson, NY 12563

Clendaniel, Calvin, PO Box 125, Lincoln, DE 19960

Coup & Smith Architects, 400 Mary Ave., Calexico, CA 92231

Crawford & Stearns, 204 N. Townsend St., Syracuse, NY 13203

Crider Partners & Jay Lecklider, 110 E. Second St., Dayton, OH 45402

Cross, Easen, 950 N. Glebe Rd., Arlington, VA 22203

Crossman-Whitney-Griffin, PC, PO Box 1198, Helena, MT 59624

CRS Sirrine, 414 W. 5th St., Fort Worth, TX 76102

CRSS, Inc., Allied Bank Tower, 1445 Ross Ave., Suite 1400, Dallas, TX 75202

Davis, Jerry C., 202 E. Border St., Suite 101, Arlington, TX 76010

Dean/Hunt/Krueger & Associates, 3080 Civic Center Plaza, Scottsdale, AZ 85251; 204 Madeira NE, Albuquerque, NM 87018

Dehnert/Richardson/Associates, PC, 350 Garfield, Lander, WY 82520

DeLair, Ronald H., 71 Bloomingdale Ave., Saranac Lake, NY 12983

Denis, Donald, AIA, PC, Box 565, Aquebogue, NY 11931

Dickinson, Nicholas. 306 6th St., Augusta, GA 30901

Dow, Howell, Gilmore Associates, Inc., 115 Post St., Midland, MI 48640

Downing, William Associates, De Witt Bldg., Ithaca, NY 14850

Durrant Architects Inc., 2445 Darwin Rd. at International Lane, Madison, WI 53704

Echols-Sparger & Associates, PO Drawer 391, Marion, VA 24354

Eggars Group–Bryant Gould, Trenton, NJ 08650

F & S Partners, Inc., 3535 Travis, #201, Dallas, TX 75204

Fairfield Design Associates, 400 Main St., Stamford, CT 06901

Faridy, Thorne, Madish Associates, Trenton, NJ

Farley, Robert D. & James H. Ballou, 16 Park St., Danvers, MA 01923

Feibes, Schmitt & Pitts, Associated Architects, 91 Fourth St., Troy, NY 12180

Feinknopf, Macioce, Schappa, Architects, 274 Marconi Blvd., Columbus, OH 43215

Fellman, Raymond F., 570 Broadway, Amityville, NY 11701

Fielden, Robert A., Inc., 1555 E. Flamingo Rd., Las Vegas, NV 89119

Fitts, James H., III, 1606 Paul W. "Bear" Bryant Dr., Tuscaloosa, AL 35401

Fourth Street Design Studio, 434 Fourth St., Annapolis, MD 21403

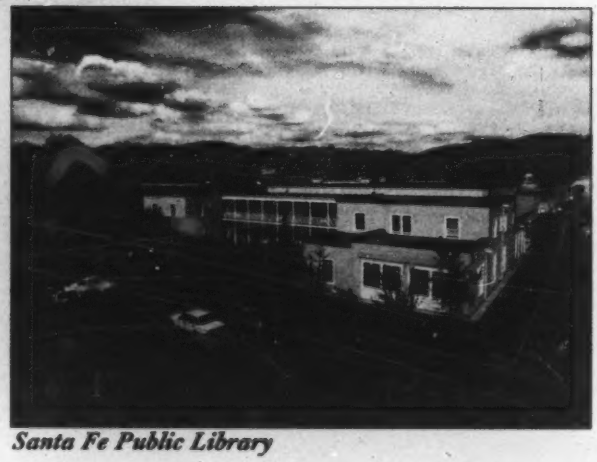
• LAWRENCE S. WILLIAMS, II

Blue Ridge Regional Lib., Martinsville, Va.

WALT O'NEAL

Eufala Carnegie Library, Ala.

Community Library, Ketchum, Id.



Santa Fe Public Library

Freeman, F.D., Associates, Inc., 3305 W. Davis, Suite 203, Conroe, TX 77304
Fryberger, Dates, AIA, PO Box 564, Sun Valley, ID 83353
Frye Gillan Molinaro Architects, Ltd., 730 North Franklin St., Suite 305, Chicago, IL 60610
Gaffney Architects, Inc., 800 Main St., PO Box 911, Dennis, MA 02638
Gale Engineering, 8 School St., Weymouth, MA 02189
Garfinkel & Gerecke, 4 Independence Ave., Tappan, NY 10983
Geller, Abraham W. & Associates, 24 W. 25th St., New York, NY 10010
Genson, Earlich, Inc., Port Washington, WI 53074
Gerken, Upham, Smith, Architects & Consultants, Inc., PO Box 155, Ormond Beach, FL 32075
Gibson & Reno, AIA, 418 E. Cooper, Aspen, CO 81611
Gordon, Wally of Deems/Lewis & Partners, 320 Laurel St., San Diego, CA 92101
Graves, Boynton, Williams, 900 N.W. 36th St., Norman, OK 73072
Gregory, Rice W., III, 101 Regency Place, W. Monroe, LA 71201
Hackney, Sears & Associates, AIA, PO Box 1067, Durham, NC 27702
Harokopis, George of Banner Associates
Harris, W.T. & Associates, 1000 N. Turner, Hobbs, NM 88240
Hawtin, Bruce, PO Box 1682, Jackson, WY 83001
Helfrich, Grantham & Helfrich, 21 E. York St., Savannah, GA 31401
Herbert, Charles & Associates, 202 Fleming Bldg., Des Moines, IA 50309
Hersh, Anne of Hunt Engineers & Architects, 185 E. Corning Rd., Corning, NY 14830
Heylman, Warren C. & Partners, North 100 Parkade Plaza, Spokane, WA 99201
Hill, Errol, Architect, Inc., 1511 Maryland Pkwy., Las Vegas, NV 89104
Hill, Jerry, of Morgan, O'Neal, Hill & Sutton, 4100 A, S. Medford Dr., Lufkin, TX 75901
The Hillier Group, 777 Alexander Rd./CN23, Princeton, NJ 08540
Hoffman, Edward C., Jr., 29 W. Orange St., Tarpon Springs, FL 34689
Holliday, Couch, Hollis & Jelks, Suite 620, Charter Medical Bldg., Mulberry St., Macon, GA 31201
Hoskins-Western-Sonderegger, Inc., Lincoln, NE
Howe, John H. & Associates, 151 W. Burnsville Pkwy., Burnsville, MN 55337
Hueber-Hares-Glavin, 726 W. Onondaga St., Syracuse, NY 13204
Huntington Harmsen Ewing, Architects, Storm Lake, IA 50588
Inabnet, J. Ashley, PO Box 1704, Sidel, LA 70459
Indiana University Physical Facilities, Service Bldg., Bloomington, IN 47405
Inter Design Group Inc., 141 E. Ohio, Indianapolis, IN 46206
Jacobs-Architects, Inc., 1134 S. Enota Dr., NE, Gainesville, GA 30501
Jankowski, James C. of Carol Ross Barney Architects, Inc., 11 East Adams, Chicago, IL 60603
Johnson, Jim, 506 N. Gloster, Tupelo, MS 38802
Jones & Herrin Architects, AIA, 104 Jefferson St., Huntsville, AL 35801
Jordan, James, 81 W. Main St., Richfield Springs, NY 13439
Jordan, John, Hancock, NH 03449
Kaminsky, Wallace, 1000 Utica Ave., Brooklyn, NY 11203
Kaplan, Gaunt, De Santis, Red Bank, NJ 07701
Kestutis Germanas, Mimbres, Inc., 205 Montezuma, NM 87501
Kilcrease, Ronald, 200 Greenleaves, Mandeville, LA 70448
Killian & Associates, 506 N. Shipp, Hobbs, NM 88240
Kirkman Associates, Inc., Dalton, GA
Kluttz, James F., Rte. 1, Box 15, Rockwell, NC 28138
Komatsu, Albert S. & Associates, 1612 Summit, Box 2079, Fort Worth, TX 76102
Koster, William D., Koster & Associates, 1220 W. 6th St., Cleveland, OH 44113
Krewson, Jim, PO Box 1258, 2333 Palmyra Rd., Hannibal, MO 63401
Lambiase, Albert, PO Box 1250, Thermopolis, WY 82443
Langer, Daniel, Renseelear Technology Pk., 125 DeFreest Dr., Troy, NY 12180
Lapicki/Smith, PA, 211 W. Fayette St., Baltimore, MD 21201
LaRoi Architects, Ltd., 1220 Meadow Rd., Northbrook, IL 60062
LaTourell, Elaine, First & Virginia, Seattle, WA 98101
Ledbetter, W.S., Brunswick, GA
Lewis • Nelson Associates, 2800 Northup Way, Suite 100, Bellevue, WA 98004

Flagstaff City-Coconino County Public Library, Ariz.

Mustang Library, Scottsdale, Ariz.

Library Associated Architects, 706 Walnut St., Knoxville, TN 37902
Lindberg, Glen, 1422 West Lake St. Minneapolis, MN 55408
Lockwood Greene Engineers, Inc., PO Box 6280, Spartanburg, SC 29304
Lothrop Associates, 170 Hamilton Ave., White Plains, NY 10601
Luttig, John L. of James Architects & Engineers, Indianapolis, IN 46205-0809
Madison, Bernard, Long Reach Shopping Center, Columbia, MD 21045
Mammina, David, 134-26 225th St., Laurelton, NY 11413
Marsellos & Scott Architects, 404 Perry Bldg., Lufkin, TX 75901
Martin, Jim, Shelby, NC 28160
Matrix, Tulsa, OK
Meek, Jack E., AIA, PO Box 3571, San Angelo, TX 76901
Merritt & McCallum Architects, PC, 33750 Freedom Rd., Farmington, MI 48024
Milstein & Wittek & Associates, 300 Delaware Ave., Buffalo, NY 14202
Misra & Associates, 396 Clinton St., Brooklyn, NY 11231
Moffitt, J. Barry & Associates Ltd., 77 E. Thomas Rd., Suite 215, Phoenix, AZ 85012
Moore, Harvey, 113 W. Louisiana St., McKinney, TX 75069
Morgan, O'Neal, Hill & Sutton, 4100 A S. Medford Dr., Lufkin, TX 75901
Morris * Architects, PO Box 22715, Houston, TX 77227
Morris & Weneli Architects & Planners, Inc., 222 W. Lockeford, Suite 9, Lodi, CA 95240
Moscati, Thomas R., 568 Ellicott Square Bldg., Buffalo, NY 14203
Moser, William of Architectural Resources, Inc., 126 E. Superior, Duluth, MN 55802
MRS Group, 2480 Browncroft Blvd., Rochester, NY 14625
Muir & Associates, 25 W. Kiowa, Colorado Springs, CO 80903
Murphy, Timothy, 380 High St., Holyoke, MA 01040
N-Y Associates, 2700 Lake Villa Dr., Metairie, LA 70002
Nelson, Barbara, 406 Fulton St., Troy, NY 12180
Nelson Boren Architects, Inc., 160 N. Pasadena, Mesa, AZ 85201
Neumon Monson Architects, Iowa City, IA
Newman, Charles & Associates Inc., 710 E. Ogden Ave., Suite 208, Naperville, IL 60540
Nusbaum, Jack, AIA, 924 E. 11th St., Edmond, OK 73034
O'Donnell Wicklund Pigozzi & Peterson Architects, 570 Lake Cook Rd., Deerfield, IL 60015
Olsen-Coffey, 324 E. 3rd St., Tulsa, OK 74120
Outcault, John F., AIA, 74-133 El Paseo, Palm Desert, CA 92260
Papazoglakis, Thomas W., 602 E. First St., Thibodaux, LA 70301
Parker/Reinhart Associates, Ltd., 8575-A Sudley Rd., Manassas, VA 22110
Passero Associates, 100 Liberty Pole Way, Rochester, NY 14604
Perez Associates, 207 Lafayette St., New Orleans, LA 70130
Peters, Kubota & Glen, Lawrence, KA
Peterson, Rex, Yampa, CO 80483
Pettitt, Ken, 3355 Spring Mountain Rd., Las Vegas, NV 89102
Piqué, Harold E., Jr., Metairie, LA
Polier Ballard Associates, 3200 Old Wake Forest Rd., Raleigh, NC 27609
Quinlivan, Pierik & Krause, 101 E. Water St., Syracuse, NY 13201
Rancorn Wildman Krause Brezinski, 166 Cardinal Lane, Tabb, VA 23602
Randall, J. Parke of Pecsok, Jelliffe, Randall & Nice, 1012 E. 75th St., Indianapolis, IN 46240
Rapp Partners, 3901 Broadway, Galveston, TX 77553
Reed, John, 3003 Louisiana Blvd. NE, Albuquerque, NM 87110
Reinert, Keith, 259 Harrison Blvd., Valparaiso, WI 46363
Reutershan, Quentin, 140 Market St., Potsdam, NY 13676
Reynolds, Smith & Hills, 1715 N. Westshore Blvd., Suite 500, Tampa, FL 33622
RGDC, Inc., 10101 S. Penn Ave., Oklahoma City, OK 73159
Richardson Associates, 110 Regent St., Salt Lake City, UT 84111
Richter, Cornbrooks, Gribble, Inc., 2120 N. Charles St., Baltimore, MD 21218
Robeson, Ernest K., PO Box 931, Deer Park, WA 99006
Rogers & Reynolds Architects, Inc., 506 S. Main St., Blacksburg, VA 24060
Rosenvold, George W., Architectural & Engineering Associates, 16 Cornelia St., Plattsburg, NY 12901
Ryan, David, Brattleboro Design Group, 103 Main St., Brattleboro, VT 05301
Sagistano, Lee A., Levittown, NY 11756
St. Lawrence University & Higley Builders, Park St., Canton, NY 13617
San Diego County Department of General Services, A&E Div., 5555 Overland Ave., Bldg. 2, Rm. 220 (M.S.0368), San Diego, CA 92123
Scaffidi & Moore, Architects, 4535 Bailey Ave., Buffalo, NY 14226
Schaardt & Fullan, 2099 Bellmore Ave., Bellmore, NY 11710
Scherer, Jeffrey & Barry Petit of Meyer Scherer & Rockcastle, 325 Second Ave. N. Minneapolis, MN 55401
Schweizer Associates, CNA Tower, PO Box 1471, Orlando, FL 32802
Scofield/Colgan Architects, Hudson River Marina, PO Box 806, Nyack, NY 10520
Selden, Kenneth, 9475 Boston State Rd., Boston, NY 14025
Shank, Kleineman, DeZelar, 1885 University Ave., Suite 201, St. Paul, MN 55104
Sheffer, L. Miles
Shepley Bulfinch Richardson & Abbott, 40 Broad St., Boston, MA 02109
Simkins, Bill, St. Paul, MN
Siracuse, Carol C., 33 Church St., Freedonia, NY 14063
Slaughter & Allred, PA, AIA, PO Box 447, Pascagoula, MS 39567
Slyter, Gary, Gibbs & Olson, Inc., 1405 17th Ave., Longview, WA 98632
SMS Architects, Inc., 59 Grove St., New Canaan, CT 06840
Snowdon & Hopkins, 201 Gore Creek Dr., Vail, CO 81658
Spanger & Manley, 525 E. Taylor St., Griffin, GA 30223
Squicciarin, Michael J., New Hyde Park, NY 11040
Steinman, Arthur Craig & Associates, 745 Emerson St., Palo Alto, CA 94301
Swatt, George, 300 Tulip St., Liverpool, NY 13088
Tabeling, Michael T. of VWV Architects, Inc., 8500 Station St., Mentor, OH 44060
Tappe, A. Anthony & Associates, 132 Lincoln St. Boston, MA
Tate & Snyder Architects, 5280 S. Eastern, Las Vegas, NV 89119
Taylor, E. Perry & Michael C. Hamrick, Eufaula, AL
Taylor, K. Don, 540 West Main, Helena, MT 59601
Taylor, Wm. Henry, AIA & Associates, 776 E. Green St., Suite 204, Pasadena, CA 91101
Teitsch, John, Teitsch-Kent Architects, 72 Albany St., Cazenovia, NY 13035
Thern, Richard of Thern Design Centre, Waupaca, WI 54981
Thomson & Associates, 107 E. Ann St., Valdosta, GA 31601
Thomson, W. Conner, 2906-B N. Patterson St., Valdosta, GA 31602
Thurston, Bryan, STB Architects & Planners, Dallas, TX
Trott & Bean Architects, Inc., 77 E. Nationwide Blvd., Columbus, OH 43215
Tuten, John A. & Associates, 1316½ Newcastle St., Brunswick, GA 31520
Tymoff, John of Williams, Tazewell & Cooke, 710 W. 21st St., Norfolk, VA 23517
Vickery, Oversat & Awsumb, 435 N. Michigan, Rm. 1515, Chicago, IL 60611
Walker/Rosenbarger, 810 E. Market St., New Albany, IN 47150
Walton, Charles & Associates, 320 Arden Ave., Suite 210, Glendale, CA 91202
Ward, Barry of Leo A. Daly & Co., 8600 Indian Hills Dr., Omaha, NE 68114
Warner, Burns, Toan & Lunde, 330 W. 42nd St., New York, NY 10036
Watkins-Puskar Partnership, 237 Bridge Dr., Joppatowne, MD 21085
Watwood & Heavener, Inc., PO Drawer W, Highway 161 E., Centralia, IL 62801
Wendel Engineers, Inc., Akron, NY 14001
Wendt, Karl H., 4036 Kinney Gulf Rd., Cortland, NY 13045
Werfel, Laurence, 75-19 Vleigh Place, Flushing, NY 11367
Wilson & Goff Architects, 81 Main St., St. Albans, WV 25177
Wilson, Klaes, Brucker & Wonder, 5466 Broadway, Lancaster, NY 14086
Wilson, Robert L., 1743 86th St., Brooklyn, NY 11214
Wisznia & Associates, 1740 First City Tower II, Corpus Christi, TX 78478
Wobser, Bruce D., 800 Croghan St., Fremont, OH 43420
Wulff, David H., AIA, 414 Andrews St., Rochester, NY 14614
Yarbro-Kempinger, 1018 W. South Park Ave., Oshkosh, WI 54901
Yaussi & Aceti Architects, 220 Sterling St., Watertown, NY 13601
Yeargin, Guy A., 212-B W. Second Ave., Gastonia, NC 28052
Young, Paul, 2601 E. Lincoln, Bloomington, IL 61701
Yu, Jane, AIA, 19 W. 96th St., New York, NY 10025

Akwesasne Library & Cultural Center, Hogansburg, N.Y.

Library Projects in Progress

The "Projects in Progress" section, now in its third year, surpasses all our initial expectations for its utility and longevity. The total number of projects listed has increased 49 percent in two years. Library construction has taken off and it doesn't appear it will slow down for the next few years at least. Anyone worried about the future of libraries, breathe a sigh of relief: they're going to be around for a long time. And within the next three to four years, there will be 586 more of them.

The list of individual projects submitted follows with the stage(s) of progress checked accordingly.

Pre-design stage:

1. Preliminary investigation
2. Program filed
3. Project funded
4. Architect selected

Design stage:

5. Design stage in progress
6. Construction documents completed
7. Bidding complete
8. Contracts awarded

The date following the library name represents the estimated year of completion.

Public Library Projects

NAME OF LIBRARY	STAGES								NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
ALABAMA									Gardendale PL [1988]	✓	✓		✓	✓			
Adelia M. Russell Library, Alexander City [1987]								✓	Clyde Nix PL, Hamilton [1988]		✓	✓	✓	✓	✓		✓
Andalusia PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓	Helena PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Auburn PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Irondale PL [1988]	✓	✓	✓	✓	✓	✓		
Hoover PL, Birmingham [1989]	✓	✓		✓		✓			Jacksonville PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Smithfield Branch, Birmingham [1987]	✓	✓	✓	✓	✓	✓	✓	✓	LaFayette PL [?]	✓	✓	✓	✓				
N. Shelby County Lib., Columbiana [1988]	✓	✓	✓	✓	✓	✓	✓	✓	Rainsville PL [1988]	✓	✓	✓	✓	✓			
Cullman Cty. PL [1988]	✓	✓	✓	✓	✓				Saraland PL [1988]	✓	✓	✓	✓	✓	✓	✓	
Horseshoe Bend Regional Lib., Dadeville [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Library Board-Town of Sumiton [1988]			✓	✓			✓	
Demopolis PL [1988]	✓		✓	✓	✓				**ARIZONA**								
Eufaula Carnegie Library [?]	✓			✓	✓				Scottsdale PL [1988]							✓	✓
Gadsden PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓	Tucson PL [1990]	✓	✓	✓	✓	✓	✓	✓	

LIBRARY BUILDINGS 1987

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
CALIFORNIA								
Baker Street Branch, Bakersfield [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Kern County Library, Bakersfield [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Beverly Hills PL [1989]								✓
Carlsbad City Library [1990]	✓							
Cupertino Community Library [1987]								✓
El Cajon Library [1991]	✓	✓		✓	✓			
Escalon Branch Library [?]	✓	✓						
Heritage Park Regional, Irvine [1988]								✓
Crown Valley Br., Laguna Niguel [1987]								✓
Kern County Library, Lake Isabella [1988]	✓	✓	✓	✓	✓			
Lawndale Library [?]	✓	✓		✓	✓			
Oceanside PL [1989]	✓	✓	✓	✓	✓	✓		
Parlier Branch Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Ramona Branch [1988]	✓	✓	✓	✓				
Redwood City PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Rosemead Library [?]	✓	✓	✓	✓				
Central Library, Sacramento [1990]			✓	✓	✓			
Linda Vista Branch, San Diego [1987]	✓	✓	✓	✓	✓	✓	✓	✓
San Geronimo Valley Branch [1987]	✓	✓	✓	✓	✓	✓	✓	✓
San Marcos Library [1989]	✓	✓	✓					
Tuolumne County Free Library, Sonora [1987]	✓	✓	✓	✓	✓	✓	✓	✓
South Whittier Lib., Whittier [?]				✓		✓		
Willits Branch [1988]	✓	✓	✓	✓	✓			
Willowbrook Library [1987]	✓	✓	✓	✓				✓
Woodland PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
COLORADO								
P.S. Miller Lib., Castle Rock [1987]								✓
Loveland PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Werner Lib., Steamboat Springs [1987]	✓	✓	✓	✓	✓	✓	✓	✓
CONNECTICUT								
Prosser PL, Bloomfield [1988]	✓	✓	✓	✓	✓	✓	✓	✓
T.A. Hungerford Library, Harwinton [1988]	✓	✓	✓	✓	✓	✓		
E.C. Scranton Memorial Library, Madison [1988]							✓	✓
Lucy Robbins Welles, Newington [1987]	✓	✓	✓	✓		✓	✓	✓
Preston PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
DELAWARE								
Milton PL [1987]			✓	✓		✓	✓	✓
Selbyville PL [1990]						✓	✓	
DISTRICT OF COLUMBIA								
Gelman Library [1988]	✓	✓	✓	✓		✓	✓	✓
Shepherd Park Branch [1989]	✓	✓	✓	✓	✓			
FLORIDA								
Casselberry Central Branch [1988]								✓
Hugh Embry Library, Dade City [1989]	✓	✓	✓	✓	✓			
Volusia Cty., Daytona Beach [1987]								✓
DeLand Area Library, DeLand [1988]	✓	✓	✓	✓	✓	✓		
Deltona PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Edgewater PL [1988]	✓	✓	✓	✓	✓	✓		
So. Holiday Neighborhood Lib., Holiday [1989]			✓	✓	✓			
Hudson Area Library [1989]			✓	✓	✓			
Lake Helen-Hopkins Lib., Lake Helen [1988]	✓	✓	✓	✓	✓	✓		
Northwest Branch, Lake Mary [1988]								✓
West Branch, Longwood [1988]								✓
East Naples Branch, Naples [1988]		✓	✓	✓	✓			
Marco Island Branch, Naples [1988]			✓	✓		✓	✓	✓
East Branch, Oviedo [1987]								✓
Palm Harbor Library [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Regency Park Branch, Port Richey [1988]	✓	✓	✓	✓	✓			
North Branch, Sanford [1987]								✓
GEORGIA								
Cook County Library, Adel [1989]	✓	✓		✓				
Northwest Branch, Albany [1988]	✓	✓	✓	✓	✓			
Southside Branch, Albany [1988]	✓	✓	✓	✓	✓			

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
Tallulah Massey Branch, Albany [1989]	✓	✓		✓	✓			
Alma/Bacon County PL, Alma [1988]								✓
Victoria Evans Memorial, Ashburn [1988]	✓	✓	✓	✓	✓			
Chamblee PL, Atlanta [1988]	✓	✓	✓	✓	✓			
Warren P. Sewell Memorial Lib., Bowdon [1988]	✓	✓	✓	✓	✓			
Warren P. Sewell Memorial Lib., Bremen [1988]	✓	✓	✓	✓	✓			
Broxton PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Roddenbery Memorial Library, Cairo [1989]	✓	✓	✓	✓	✓	✓	✓	
Cartersville-Bartow Cty. [1988]		✓	✓	✓		✓	✓	
Miller County PL, Colquitt [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Cordele-Crisp Carnegie Lib. [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Chattahoochee County PL, Cusseta [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Madison County Library, Danielsville [1988]	✓	✓		✓				
Ida Hilton PL, Darien [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Seminole County PL, Donalsonville [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Dunwoody PL [1988]	✓	✓	✓	✓	✓	✓		
Eatonton-Putnam Cty. Lib. [1987]								✓
Calhoun County Library, Edison [1987]	✓	✓	✓	✓	✓	✓		
Emmie Nelson Library, Euharlee [1987]								✓
Clay County Library, Ft. Gaines [?]	✓	✓	✓	✓	✓	✓		
Jones County PL, Gray [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Walter & Dorothy S. Salter PL, Hahira [1988]			✓	✓	✓	✓		
Wayne Cty. Lib., Jesup [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Clayton Cty. Lib., Jonesboro [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Kennesaw Branch Library [1989]	✓	✓	✓	✓				
Camden Cty. Library, Kingsland [1988]	✓	✓	✓	✓	✓	✓		
Loganville City Library [1989]			✓					
Telfair County Library, McRae [1988]	✓	✓	✓	✓	✓	✓		
Morgan Cty. Lib., Madison [1988]					✓			
Cobb County PL, Marietta [1989]		✓	✓	✓	✓	✓		
Merchant's Walk Lib., Marietta [1987]								✓
Northeast Cobb Branch, Marietta [1989]	✓	✓	✓	✓				
Southeast Cobb Branch, Marietta [1989]	✓	✓	✓	✓				
West Cobb Branch, Marietta [1989]	✓	✓	✓	✓	✓			
Monroe-Walton Cty. Lib. [1988]								✓
Jasper Cty. Lib., Monticello [1987]								✓
Nicholson PL [1988]	✓	✓						
Powder Springs Branch [1989]	✓	✓	✓	✓				
South Effingham Branch, Rincon [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Sara Hightower Regional, Rome [1988]	✓	✓	✓	✓	✓	✓	✓	✓
St. Mary's Library [1988]	✓	✓	✓	✓	✓	✓		
Hancock Cty. Lib., Sparta [1989]				✓				
Sue Kellogg, Stone Mountain [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Screven County Library, Sylvania [1988]	✓	✓	✓	✓	✓			
Margaret Jones Lib., Sylvester [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Thunderbolt Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Coastal Plain Regional, Tifton [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Toccoa-Stephens County PL, Toccoa [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Reid H. Cofer Lib., Tucker [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Tybee Island Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Warren County Library, Warrenton [1989]	✓	✓						
Piedmont Regional Lib., Winder [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Woodstock PL [1989]			✓		✓			
ILLINOIS								
Bartlett PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Bridgeview PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Calumet Park PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Hope Weltry Township Lib., Cerro Gordo [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Homer Township PL, Lockport [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Village of Oreana Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Palos Heights PL [1988]		✓	✓	✓		✓	✓	✓
Rolling Meadows Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
St. Charles PL [1989]	✓	✓	✓	✓	✓	✓	✓	✓
Taylorville PL [1987]	✓	✓		✓		✓	✓	✓
Wilmington PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓

LIBRARY BUILDINGS 1987

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
INDIANA								
Alexandria-Monroe PL [?]	✓							
Angola-Carnegie PL, Angola [?]	✓	✓	✓	✓	✓	✓	✓	✓
Batesville Memorial PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Bartholomew Cty. PL, Columbus [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Dunkirk PL [1988]	✓	✓	✓	✓		✓	✓	✓
Franklin-Johnson PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Goshen PL [?]	✓							
Hagerstown-Jefferson Twp. Library [1988]	✓	✓		✓	✓			
Jeffersonville Twp. PL [1988]	✓	✓	✓	✓	✓			
Tippecanoe Cty. PL, Lafayette [1989]	✓	✓		✓	✓	✓		
Lawrenceburg PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Peru PL [1988]	✓	✓		✓				
Rushville PL [1989]	✓			✓				
Warsaw Community PL [?]	✓							
IOWA								
Blue Grass Branch [?]	✓	✓	✓		✓	✓	✓	
Stewart Memorial Lib., Cedar Rapids [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Drake PL, Centerville [1987]	✓	✓	✓	✓	✓	✓		
Donnellson PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Sioux Center PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
KENTUCKY								
Boyd County PL, Ashland [1988]				✓	✓			
Trimble Cty. PL, Bedford [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Harrison County PL, Cynthiana [1988]	✓		✓	✓				
Danville-Boyle Cty. PL [1988]	✓	✓	✓	✓	✓	✓		
Hardin County PL, Elizabethtown [1989]	✓	✓		✓	✓			
Henry Cty. PL, Eminence [1988]			✓	✓	✓			
Paul Sawyier PL, Frankfort [1988]					✓	✓	✓	✓
Lexington PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Casey County PL, Liberty [1988]	✓				✓			
Campbell County PL, Newport [1988]	✓	✓	✓	✓		✓		
Paris-Bourbon County Library, Paris [1988]					✓			
Floyd County Library, Prestonsburg [1987]	✓	✓	✓	✓	✓	✓	✓	✓
LOUISIANA								
Jefferson Parish, Harvey [1989]	✓	✓	✓	✓	✓			
Claiborne Parish Library, Homer [1988]			✓	✓		✓		
Jefferson Parish Library, Metairie [1990]	✓		✓	✓				
Metairie Road Branch, Metairie [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Mayor Broadmoor Branch, New Orleans [?]				✓				
New Orleans Central PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Live Oak Branch, Waggaman [1988]	✓	✓	✓	✓	✓	✓	✓	✓
MAINE								
Walker Memorial Library, Westbrook [1989]	✓	✓	✓	✓	✓	✓	✓	✓
MARYLAND								
Anne Arundel Cty. Library, Annapolis [?]	✓	✓						
Edgewater Branch, Annapolis [?]	✓	✓	✓	✓	✓			
White Marsh Library, Baltimore [1987]								✓
Bel Air Branch [1990]	✓							
Little Falls Community Library, Bethesda [1989]	✓	✓	✓	✓	✓			
Chevy Chase Community Library [1989]	✓	✓	✓	✓				
Howard County Library, Columbia [1991]			✓					
Damascus Community Library [1990]	✓	✓	✓	✓	✓			
Cecil County HQ, Elkton [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Germantown Community Library [1990]	✓	✓	✓	✓	✓			
Kensington Park Comm. Lib., Kensington [1990]	✓	✓						
So. Maryland Regnl. Lib. Assn., LaPlata [1989]	✓	✓	✓	✓	✓	✓	✓	
Largo-Kettering Branch, Largo [?]	✓	✓						
Laurel Branch [?]	✓	✓						
Calvert County PL, Prince Frederick [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Somerset Cty., Princess Anne [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Aspen Hill Community Library, Rockville [1989]	✓	✓	✓	✓	✓			
Rockville Regional Library [1991]	✓	✓						
Severna Park Branch [?]	✓		✓					
Fairland Community Lib., Silver Spring [1992]	✓	✓						

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
Silver Spring Community Library [1988]	✓	✓	✓	✓	✓	✓	✓	✓
White Oak Community Lib., Silver Spring [?]	✓	✓	✓	✓	✓			
Walkersville Branch [1987]	✓	✓	✓	✓	✓	✓	✓	✓
MASSACHUSETTS								
Jones Library, Amherst [1990]	✓	✓	✓	✓				
Memorial Hall Library, Andover [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Robbins Library, Arlington [1989]	✓	✓	✓	✓	✓			
Attleboro PL [?]	✓	✓		✓	✓			
Boston PL [1993]	✓	✓	✓	✓	✓			
Boylston PL [?]				✓	✓			
Eldredge PL, Chatham [1989]	✓	✓		✓	✓			
Chelmsford PL [?]	✓							
Chelsea PL [?]	✓	✓	✓	✓				
Chilmark PL [1989]	✓	✓		✓	✓			
Eastham PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Fall River PL [1994]	✓	✓	✓	✓				
Franklin PL [1988]	✓	✓	✓	✓		✓	✓	✓
Hanson PL [?]	✓			✓				
Lincoln PL [1989]	✓	✓	✓	✓	✓	✓	✓	
Reuben Hoar Lib., Littleton [1988]	✓	✓	✓	✓	✓			
Hubbard Memorial Library, Ludlow [1989]	✓	✓						
Milton PL [1987]								✓
Monson Free Library [1989]	✓	✓	✓	✓	✓	✓	✓	
Newton Free Library [1990]	✓	✓	✓	✓	✓			
Stevens Memorial, North Andover [1989]	✓	✓		✓	✓			
Plymouth PL [1992]	✓	✓		✓				
Southborough Library [1989]	✓	✓	✓	✓	✓			
Conant PL, Sterling [1989]					✓			
Watertown Free PL [1989]	✓	✓		✓	✓			
Wayland PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Wellfleet PL [1988]	✓	✓	✓	✓	✓	✓		
West Bridgewater PL [1989]	✓	✓	✓	✓	✓			
G.A.R. Memorial, West Newbury [1988?]	✓	✓	✓	✓	✓	✓	✓	✓
J.V. Fletcher Lib., Westford [1989]	✓	✓	✓	✓	✓	✓	✓	✓
Whitman PL [1988]	✓	✓	✓	✓	✓	✓		
Fiske PL, Wrentham [?]	✓							
MINNESOTA								
Cloquet PL [1987]								✓
Northdale Br.-Anoka Cty., Coon Rapids [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Forest Lake PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Hennepin County Library, Maple Grove [1987]								✓
MISSISSIPPI								
Hancock County Library, Bay St. Louis [1988]		✓		✓				
Centreville PL [1988]			✓	✓	✓			
Bolivar County Library, Cleveland [1988]	✓			✓	✓			
New Hebron PL [1988]			✓					
Ricks Memorial Library, Yazoo City [1988]	✓							
MISSOURI								
Barry-Lawrence Regnl. Lib., Mt. Vernon [1987]	✓	✓	✓	✓	✓	✓	✓	✓
MONTANA								
Butte-Silver Bow PL, Butte [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Hamilton PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Big Horn Cty. Lib., Hardin [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Laurel PL [1988]	✓		✓	✓	✓			
Lincoln County Library, Libby [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Lincoln Community Library [?]				✓	✓			
Polson City Library [?]	✓	✓		✓	✓			
Rockland Memorial Library [?]	✓	✓			✓			
Rush City PL [1988]	✓	✓	✓	✓	✓	✓	✓	
NEVADA								
Beatty Community Library [1988]			✓			✓	✓	✓
Green Valley Lib., Henderson [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Henderson District PL [1989]	✓	✓	✓	✓	✓			
Clark Cty. Lib. District, Las Vegas [1989]	✓	✓	✓	✓	✓			
Rainbow Library, Las Vegas [1989]	✓	✓	✓					

LIBRARY BUILDINGS 1987

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
Sunrise Library, Las Vegas [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Douglas County PL, Minden [1988]	✓	✓	✓	✓				
Reno Central Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Sparks Branch, Reno [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Stead Branch, Reno [1988]	✓	✓	✓					
West Las Vegas Library [1988]	✓	✓	✓	✓	✓			
NEW HAMPSHIRE								
Goffstown PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
North Conway PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Sanbornton PL [1988]	✓	✓	✓	✓	✓	✓		
NEW JERSEY								
Blackwood Rotary PL [1988]	✓	✓	✓	✓	✓	✓		
Bogotta PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Linwood PL [1988]	✓	✓	✓	✓	✓	✓		
Nutley PL [1989]	✓	✓	✓	✓	✓	✓	✓	✓
Paramus PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Piscataway Township Free PL [1989]	✓	✓	✓	✓		✓		
W. Deptford PL, Thorofare [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Wall Branch [1990]	✓	✓	✓	✓	✓			
Westfield Memorial Lib. [1988]			✓	✓				✓
NEW MEXICO								
Los Lunas PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
New Durham Library Resource Center [1987]	✓	✓	✓	✓	✓	✓	✓	✓
The Public Library, Silver City [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Truth or Consequences PL [1988]	✓	✓	✓	✓	✓			
NEW YORK								
Stevens Memorial Library, Attica [1987]			✓					✓
Babylon PL [?]				✓	✓			
Baldwin PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Bayville Free Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Broome Cty. PL, Binghamton [?]	✓							
West Branch, Binghamton [1987]								✓
Brentwood PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Brighton Beach Branch, Brooklyn [?]	✓	✓	✓	✓	✓			
Brooklyn PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Brower Park Branch, Brooklyn [?]	✓	✓	✓	✓	✓			
Clarendon Branch, Brooklyn [?]	✓	✓	✓	✓	✓	✓		
East Flatbush Branch, Brooklyn [?]	✓	✓	✓	✓	✓	✓		
Homecrest Branch, Brooklyn [?]	✓	✓	✓					
McKinley Park Branch, Brooklyn [?]	✓	✓	✓					
Paerdegat Branch, Brooklyn [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Ulmer Park Branch, Brooklyn [?]	✓	✓	✓					
Cambridge PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Cazenovia PL [?]	✓	✓		✓	✓			
Center Moriches Free PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Cheektowaga PL [?]	✓							
Copiague Memorial PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Croton Free Library, Croton-on-Hudson [1988]	✓	✓	✓	✓	✓	✓		
Hammond Library, Crown Point [?]	✓	✓	✓	✓	✓			
Half Hollow Hills Comm. Lib., Dix Hills [1989]	✓	✓	✓	✓	✓	✓		
East Syracuse Free Library [1988]	✓	✓	✓	✓	✓	✓		
West Harrison Library, East White Plains [1991]	✓							
Eden Free Library [1988]				✓	✓			
Gowanda Free Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Grand Island Memorial Library [1989]	✓			✓				
Louise Adelia Read Memorial, Hancock [?]	✓			✓	✓			
Harrison PL [1989]				✓	✓			
Highland PL [?]	✓							
E. Fishkill Comm. Lib., Hopewell Junction [1988]	✓	✓	✓	✓		✓	✓	✓
Jericho PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Nioga Library System, Lockport [1988]	✓	✓	✓	✓	✓			
Marlboro Free Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Melville Branch, Melville [1989]	✓	✓	✓	✓	✓			
Longwood PL, Middle Island [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Montauk Library [1989]	✓	✓	✓	✓	✓			

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
New City Library [1988]				✓		✓	✓	✓
Hillside PL, New Hyde Park [?]	✓							
New York PL/Research Library [1989]	✓	✓	✓	✓	✓	✓		
North Bellmore PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
North Collins Memorial Library [1990]	✓				✓			
Northport-East Northport PL [?]	✓							
Old Forge Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Oriskany PL [1988]		✓	✓	✓	✓			
Ossining PL [1991]	✓		✓	✓				
Overland Park PL [?]	✓							
Patchogue-Medford Library, Patchogue [?]	✓	✓	✓	✓	✓			
Peru Free Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Port Washington PL [1992]	✓	✓		✓				
Adriance Memorial Lib., Poughkeepsie [1991]	✓							
Ransomville Free Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Brighton Memorial Library, Rochester [?]	✓							
Gates PL, Rochester [1992]	✓							
Lincoln Branch, Rochester [1989]	✓							
Maplewood Branch, Rochester [1991]	✓							
Marketview Branch, Rochester [1991]	✓							
Rochester PL [1992]	✓							
Sully Branch, Rochester [1992]	✓							
West Br./Irondequoit PL, Rochester [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Rockville Centre PL [1989]	✓	✓		✓	✓			
Jervis PL, Rome [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Seneca Nation Library, Salamanca [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Ainsworth Memorial Lib., Sandy Creek [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Mohawk Valley Lib. Assn., Schenectady [1988]	✓	✓	✓	✓	✓	✓		
Schenectady County PL [1990]	✓							
Glenville Branch, Scotia [1989]	✓							
John C. Hart Memorial Lib., Shrub Oak [1989]	✓	✓	✓	✓	✓			
Mundy Branch Library, Syracuse [1988]	✓	✓	✓	✓	✓	✓		
Onondaga Cty. PL, Syracuse [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Valley Cottage Free Library [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Henry Waldinger Memorial, Valley Stream [?]	✓			✓				
Amherst Lib. at Audubon, W. Amherst [1987]								✓
Westhampton Free Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Woodstock Library [1988]	✓	✓	✓	✓	✓	✓	✓	✓
NORTH CAROLINA								
Charlotte & Mecklenburg Cty. Lib. [1988]		✓	✓	✓		✓	✓	✓
Harnett County PL, Lillington [1988]								✓
Newport PL [1987]	✓	✓	✓	✓		✓	✓	✓
Rowan PL, Salisbury [1988]								✓
Ashe Cty. Lib., West Jefferson [1987]	✓	✓	✓	✓	✓	✓	✓	✓
NORTH DAKOTA								
Bismarck Veterans Memorial PL [1989]							✓	✓
Enderlin Municipal Library [1988]		✓			✓			
Cavalier Cty. Library, Langdon [1988]								✓
Minot PL [1988]					✓			
OHIO								
Akron-Summit County PL, Akron [1990]					✓			
Green Branch, Akron [1989]	✓							
Norton Branch, Akron [1988]								✓
Portage Lakes Branch, Akron [1990]	✓							
Stanton D. Johns Memorial, Amanda [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Aurora Branch [1989]	✓	✓		✓				
Bellville Branch [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Berea Branch [1988]	✓	✓	✓	✓	✓			
Butler Branch [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Caldwell PL [1988]	✓			✓	✓			
Dorcas Carey PL, Carey [1987]								✓
Chagrin Falls Branch [1988]								✓
Chardon Library [1988]								✓
Geauga West Library, Chesterland [1989]					✓			
Grandview Heights PL, Columbus [1989]	✓	✓	✓	✓	✓	✓		

LIBRARY BUILDINGS 1987

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
Karl Road Branch, Columbus [1988]	✓	✓	✓	✓	✓	✓		
Coshocton PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Dayton/Montgomery Cty. PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Dayton/Montgomery Cty. PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
East Cleveland PL [1990]	✓	✓	✓	✓	✓			
Findlay-Hancock County PL, Findlay [1990]	✓	✓		✓	✓			
Franklin PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Birchard PL, Fremont [1989]	✓	✓	✓	✓	✓	✓		
Portage District HQ, Garrettsville [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Fairfield Cty. Library, Lancaster [1986]	✓	✓	✓	✓	✓	✓	✓	✓
Lebanon PL [1988]			✓	✓		✓	✓	✓
Leetonia Community PL [?]	✓	✓		✓	✓			
Lexington Branch [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Mansfield-Richland Co. PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Ontario Branch, Mansfield [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Minerva PL [1987]								✓
New London PL [1988]						✓		
New Matamoras Branch [1987]		✓	✓	✓		✓	✓	✓
Newark PL [1986]	✓	✓	✓	✓		✓	✓	✓
Newton Falls PL [1987]								✓
Orwell PL [?]		✓		✓	✓			
Parma/Cuyahoga Cty. PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Parma Heights Branch [1988]	✓	✓	✓	✓	✓			
Paulding County Carnegie Library, Paulding [?]				✓	✓			
Pemberville PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Union Township PL, Ripley [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Sandusky Library [1988]							✓	
Marvin Memorial Library, Shelby [?]	✓	✓		✓				
Warder PL, Springfield [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Streetsboro Branch Library [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Toledo-Lucas Cty. PL [1988]								✓
Mary L. Cook PL, Waynesville [1988]								✓
Wilmington PL [1988]								✓
OKLAHOMA								
Carmen PL [?]								✓
Robt. Williams PL, Durant [1988]								✓
Hobart PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Kingfisher Memorial Library [1988]								✓
Miami PL [1987]	✓	✓	✓	✓		✓	✓	✓
Stillwater PL [?]	✓							
Stilwell PL [1988]					✓			
Sac & Fox Library, Stroud [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Tonkawa PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Woodward PL [?]	✓	✓	✓	✓	✓	✓		
OREGON								
Hermiston PL [1989]	✓	✓	✓	✓	✓			
Jefferson Co. Library, Madras [1988]	✓	✓		✓	✓			
North Bend PL [1988]	✓	✓	✓	✓	✓			
West Linn PL [1989]	✓		✓	✓	✓			
Wilsonville PL [1988]	✓	✓	✓	✓	✓	✓		
RHODE ISLAND								
East Greenwich Free Library [?]	✓							
South Kingstown PL, Peace Dale [1989]	✓	✓	✓	✓	✓			
Providence PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
N. Smithfield PL, Slatersville [1988]	✓	✓	✓	✓	✓	✓		
West Warwick PL System [1989]	✓	✓						
SOUTH CAROLINA								
Aiken County PL [1989]	✓	✓	✓	✓	✓	✓	✓	
Andrews Branch Library [1989]	✓	✓	✓	✓	✓			
Kershaw County Library, Camden [1988]		✓			✓			
Charleston County Library [1990]	✓							
Dorchester Road Br., Charleston County [1990]	✓							
Highway 61 Branch, Charleston County [1990]	✓							
Mt. Pleasant Branch, Charleston County [1990]	✓							
Northwoods Branch, Charleston County [1990]	✓							

NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8
Chester County Library [1988]	✓	✓	✓	✓	✓			
Darlington Cty. Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Georgetown County Library [1989]	✓	✓	✓	✓	✓			
Laurens County Library [1989]	✓	✓	✓	✓	✓	✓		
Nancy Carson Library, North Augusta [?]	✓	✓						
Orangeburg County Library [1988]					✓			
Lake Wylie Library, Rock Hill [1988]	✓	✓		✓				
Spartanburg County PL [1989]	✓	✓		✓	✓			
Waccamaw Neck Branch Library [1989]	✓	✓	✓	✓	✓			
Wagener Branch [1988]	✓	✓	✓	✓	✓	✓	✓	✓
TEXAS								
Clint W. Murchison Memorial, Athens [1987]								✓
Bedford PL [1987]						✓	✓	✓
Driscoll PL, Corpus Christi [?]	✓	✓	✓	✓	✓	✓		
County-City Library, Crosbyton [1988]	✓	✓	✓	✓		✓	✓	✓
Dickinson PL [1987]						✓	✓	✓
Ennis PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Diamond Hill/Jarvis Branch, Fort Worth [1988]	✓	✓	✓	✓	✓			
Helen Hall Library, League City [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Lewisville PL [?]					✓			
Mesquite Main Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
North Richland Hills PL [1987]								✓
Plano PL [1989]						✓		
Round Rock PL [1988]								✓
The Colony PL [1987]	✓	✓	✓	✓		✓	✓	✓
VIRGINIA								
Sherwoor Regional Library, Alexandria [1990]	✓	✓	✓	✓	✓			
George Mason Regional Lib., Annandale [1993]	✓	✓		✓				
Bassett PL [?]	✓		✓	✓	✓			
Chesapeake PL [1988]	✓	✓	✓	✓	✓			
Kings Park Community Library, Burke [1991]	✓	✓		✓				
Centreville Regional Library [1992]	✓	✓	✓	✓				
Chantilly Community Library [?]	✓	✓	✓	✓				
Herndon Community Library, Fairfax [?]	✓			✓				
Gloucester Library [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Eastern Loudoun Library, Leesburg [1990]	✓	✓	✓					
Leesburg Library [1990]	✓	✓	✓	✓	✓			
Thomas Balch Library, Leesburg [1991]	✓	✓	✓		✓	✓		
Lorton Community Library [1989]	✓	✓	✓	✓	✓	✓		
Lovettsville Library [1989]	✓	✓	✓					
Smyth-Bland Regional Library, Marion [1988]			✓	✓	✓			
Middleburg Library [1989]	✓	✓	✓					
Purcellville Library [1990]	✓	✓	✓	✓	✓			
Smithfield PL [1988]	✓	✓	✓	✓	✓			
Victoria PL [?]					✓			
Patrick Henry Community Library, Vienna [1993]	✓	✓		✓				
Virginia Beach PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
WASHINGTON								
Cheney Community Library [1988]	✓	✓	✓	✓	✓	✓		
Coupeville PL [1988]	✓	✓	✓	✓	✓	✓		
Mountlake Terrace PL [1988]	✓	✓	✓	✓	✓	✓		
Des Moines Library, Seattle [1988]	✓	✓	✓	✓	✓	✓	✓	
University Library, Seattle [1987]								✓
W. Seattle Community Lib., Seattle [1987]								✓
WISCONSIN								
Burlington PL [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Hudson PL [?]	✓	✓						
Manitowoc PL [1991]	✓	✓						
Plymouth PL [1988]	✓	✓	✓	✓	✓	✓		
Shawano City-Cty. Library [1989]	✓							
Waukesha PL [1988]	✓	✓	✓	✓	✓	✓	✓	✓
WYOMING								
Cokeville Branch [1987]								✓
Encampment/Riverside Library [1988]								✓
Crook County PL, Sundance [?]	✓							

Academic Projects

NAME OF LIBRARY	STAGES								NAME OF LIBRARY	STAGES							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
ALABAMA									Maryville College, St. Louis [1987]								✓
Science/Engineering Lib., Univ. of Alabama, Tuscaloosa [1989]	✓	✓	✓	✓	✓				Univ. of Missouri, St. Louis [1990]	✓	✓	✓	✓	✓			
ALASKA									**NEW JERSEY**								
Univ. of Alaska-Southeast, Juneau [1989]	✓	✓	✓	✓	✓	✓	✓	✓	Serin Physics Library, Rutgers Univ., Piscataway, N.J. [1989]		✓	✓	✓	✓			
ARIZONA									**NEW YORK**								
Arizona State Univ., Glendale [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Medgar Evers Coll./CUNY, Brooklyn [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Arizona State Univ., Tempe [1989]	✓	✓	✓	✓	✓	✓	✓	✓	Canisius College, Buffalo [1988]						✓	✓	✓
Univ. of Arizona, Tucson [1988]	✓	✓	✓	✓	✓	✓	✓		Sch. of Hotel Administration Lib., Cornell Univ., Ithaca [1988]								✓
Univ. of Arizona, Tucson [1990]	✓	✓	✓	✓	✓				Cornell Univ. Law Lib., Ithaca [1988]								✓
ARKANSAS									John Jay Coll. of Criminal Justice, New York [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Ouachita Bapt. Univ., Arkadelphia [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Niagara University [1988]	✓	✓	✓	✓	✓			
CALIFORNIA									Eastman School of Music, University of Rochester [1988]	✓	✓		✓	✓			
California State Univ., Chico [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Univ. of Rochester [1987]			✓					
Univ. of California-Davis [1991]	✓	✓	✓	✓	✓	✓			Univ. of Rochester [1987]			✓					
California State Univ., Long Beach [1989]	✓	✓	✓	✓	✓	✓			Univ. of Rochester [1987]			✓					✓
California State Univ., Northridge [1989]		✓	✓	✓	✓				Lib. for Science & Engineering, Univ. of Rochester [1987]								✓
Mills College, Oakland [1989]	✓	✓	✓	✓	✓				**NORTH CAROLINA**								
Hopkins Marine Station Lib., Stanford Univ., Pacific Grove [1989]	✓		✓	✓	✓				Duke University, Durham [1987]	✓	✓	✓					✓
Univ. of California-San Francisco [1990]						✓			North Carolina State Univ., Raleigh [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Stanford Univ., Stanford [1988]			✓	✓		✓	✓	✓	**OHIO**								
Stanford University [1992]	✓	✓							Geology/Physics Library, University of Cincinnati [1988]	✓	✓	✓		✓			
Cal. State–Stanislaus, Turlock [1989]	✓	✓	✓	✓	✓	✓	✓		Ohio Mechanics Institute/College of Applied Science, University of Cincinnati [1988]	✓	✓		✓	✓			
CONNECTICUT									Wright State Univ., Dayton [1988]	✓	✓	✓	✓	✓	✓	✓	✓
So. Connecticut State, New Haven [1987]	✓	✓	✓	✓	✓			✓	Shawnee State Univ., Portsmouth [1989]	✓	✓	✓	✓	✓			
FLORIDA									**OREGON**								
Florida Intl. Univ., North Miami [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Architecture & Allied Arts Lib., University of Oregon, Eugene [1990]	✓	✓	✓	✓	✓			
Florida State Univ., Tallahassee [1988]	✓	✓	✓	✓	✓	✓	✓	✓	Science Lib., Univ. of Oregon, Eugene [1990]	✓	✓	✓	✓	✓			
GEORGIA									University of Oregon, Eugene [1991]	✓	✓						
Mercer University, Macon [1989]								✓	George Fox College, Newberg [1988]	✓	✓	✓	✓	✓	✓	✓	
So. College of Technology, Marietta [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Portland State Univ. [1989]	✓	✓	✓	✓				
ILLINOIS									**PENNSYLVANIA**								
Southern Illinois Univ., Carbondale [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Muhlenberg Coll., Allentown [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Augustana College, Rock Island [1989]	✓	✓		✓	✓	✓			Allentown Coll., Center Valley [1987]	✓	✓	✓	✓	✓	✓	✓	✓
INDIANA									**SOUTH CAROLINA**								
Univ. of Notre Dame Law Sch. [1987]								✓	Francis Marion Coll., Florence [1989]	✓	✓	✓	✓	✓	✓	✓	✓
Indiana Univ. at South Bend [1988]	✓	✓	✓	✓	✓	✓	✓	✓	**TENNESSEE**								
KANSAS									Tennessee Wesleyan Coll., Athens [1987]	✓	✓	✓		✓	✓	✓	✓
Wichita State University [1989]	✓	✓	✓	✓	✓	✓	✓	✓	Tennessee Tech Univ., Cookeville [1989]	✓	✓	✓	✓	✓	✓	✓	✓
KENTUCKY									**TEXAS**								
Kentucky State Univ., Frankfort [1988]	✓	✓	✓	✓	✓	✓	✓	✓	Science-Technology Library, Univ. of Texas, Arlington [1988]	✓	✓	✓	✓	✓	✓	✓	✓
MARYLAND									West Texas State Univ., Canyon [?]	✓			✓				
Univ. of Maryland, College Park [1989]	✓	✓	✓	✓		✓	✓	✓	Texas Wesleyan Coll., Fort Worth [1988]								✓
Western Maryland Coll., Westminster [?]	✓			✓	✓				**VERMONT**								
MASSACHUSETTS									Vermont Law School, S. Royalton [1988]	✓	✓		✓	✓			
Northeastern Univ., Boston [1990]	✓	✓	✓	✓	✓				**VIRGINIA**								
Lib. on the History of Women in America, Radcliffe College, Cambridge [1988]	✓	✓	✓	✓	✓	✓	✓	✓	Randolph-Macon Coll., Ashland [1987]	✓	✓	✓	✓	✓	✓	✓	✓
Peabody Institute, Peabody [1989]	✓				✓				Mary Washington Coll., Fredericksburg [1988]	✓	✓	✓	✓	✓	✓	✓	✓
Babson College, Wellesley [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Norfolk State University [1988]		✓		✓	✓			
Assumption College, Worcester [1988]	✓	✓	✓	✓	✓	✓	✓	✓	**WASHINGTON**								
MICHIGAN									Whitworth Collge, Spokane [1990]	✓	✓		✓	✓			
Wayne State Univ., Detroit [1990]	✓	✓	✓	✓	✓				**WISCONSIN**								
Bio-Medical Library, Michigan State Univ., East Lansing [1991]	✓	✓	✓	✓					Univ. of Wisconsin-Madison [1990]	✓	✓	✓	✓	✓			
Hope College, Holland [1987]	✓	✓	✓	✓	✓	✓	✓	✓	Alverno Coll., Milwaukee [1988]				✓	✓	✓		
Oakland Univ., Rochester [1989]	✓	✓	✓	✓	✓	✓	✓	✓									
MINNESOTA																	
Macalester College, St. Paul [1988]	✓	✓	✓	✓	✓	✓	✓	✓									
MISSOURI																	
Univ. of Missouri-Columbia [1988]								✓									

A possible end to library growth woes

Robots in the Library: Automated Storage and Retrieval Systems

By John Kountz

INCREDIBLE ADVANCES in the application of electronic data processing to library operations have occurred over the past 20 years. Manual paper files have been reduced dramatically. Similarly, responses to patron inquiry are characterized by significant improvements in accuracy and speed. The physical library's "last mile" problem seems to be the requirement that library facilities be enlarged periodically to hold ever-growing collections. Not that libraries haven't confronted the problem; they have. In fact, like the dabbling in automation libraries pursued from 1930 through 1960, the approach to material storage presented here was sampled by a select few libraries in a primitive form in the early and mid-1970s (see Ellsworth, bibliography).

However, there is a vast difference between sampling a technology and applying it with the vigor that profit margins spur in private industry. For example, the industrial community simply couldn't afford to operate manual warehouses. Their solution is called material handling. The material handling techniques that have been successfully implemented in the industrial environment over the last decade can be applied to library materials with equal effectiveness.

John Kountz is Associate Director for Library Automation, California State University, Chancellor's Office, Long Beach

Library storage

Libraries buy, prepare for general use, and store information which, in itself, is in a diversity of physical formats. Dominant among the physical formats of information has been (and continues to be) the printed book. It follows, then, that the primary storage component of all libraries is designed to accommodate books. In the United States, most library storage has a secondary functional requirement: that of displaying stored materials in a logical sequence for the library's public.

To support these two functions, book storage in U.S. libraries has been accomplished through ranges of open shelves. On these shelves the books are arranged vertically, in single file with their spines toward the aisle to permit identification. To facilitate browsing, the books are arranged in a sequence based on subject content (typically Dewey or Library of Congress call numbers) to bring together all of the books on a given subject.

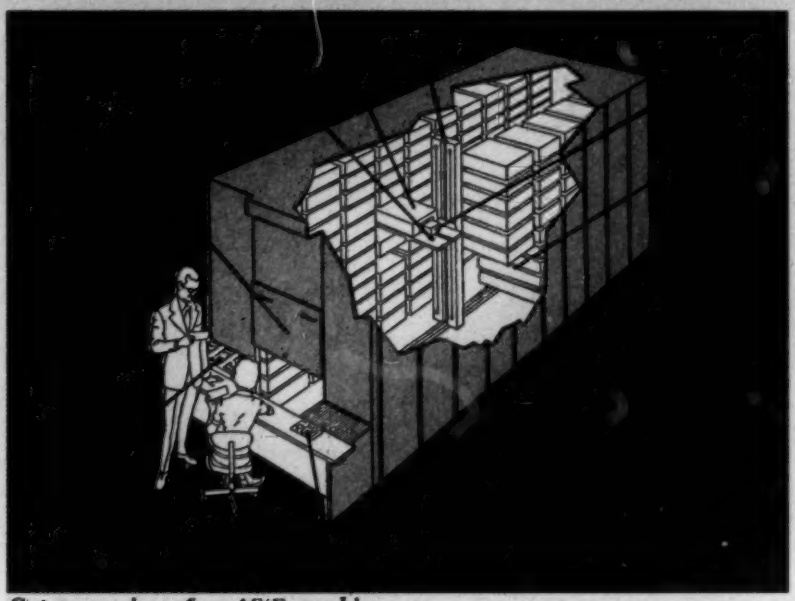
This, for most libraries generally, is the level to which library material storage techniques have evolved (cardboard boxes in the back room notwithstanding). Even with the inefficiencies of open-shelf storage, those alternatives, which have emerged and been popularly received by libraries, are based on reducing the width of aisles between the shelves or increasing the height of the shelving.

Library service in the United States has been vested in open stacks since libraries turned from the "write it on a slip of paper and we'll try to find it" of Henry Labrouste to the "go find it yourself" of Angus Snead MacDonald. In the minds of many, the open stack is the only stack. For recent, high-demand materials, they are right! A retriever system does not preempt the open stack. Rather it complements the open stack and actually will improve the user's chances of finding items. This is achieved by retiring little used materials into the retriever and, in so doing, reducing the number of dead and dying items that must be winnowed to satisfy a search. In fact, because of computer control, the use of items retired to the retriever is fully documented. As a result, periodic candidates for weeding lists can be prepared by those automated storage and retrieval (AS/R) units for items not used within a period of time designated by the library.

Industrial material storage

Industrial storage techniques have undergone a major revolution over the past ten years. Electromechanical pallet and bin handling robots have been teamed with computers to make the manual warehouse obsolete. Nor are the users of these machines and systems limited to *Fortune* 500 companies.

The machines and shelving techniques that are used in industry are deceptively elegant (Figure 1). Items to be stored are placed in bins and the bins are placed in an industrial rack assembly. A computer-controlled robot moves into and out of the rack assembly to remove and replace the bins. Each stored item is assigned to



Cut-away view of an AS/R machine

a bin and each bin is assigned to a location. On request for an item the computer communicates the bin location to the robot. The robot retrieves the bin, and carries it to a work station where an operator, guided by a video display, takes the item from the bin and gives it to the requester. Elapsed time for this operation is typically little more than one minute. Returning the item to storage, as would be required in libraries, follows essentially the reverse of this procedure and takes about the same amount of time.

Benefits of AS/R

The AS/R approach to the retrievable storage of books offers a number of attractive operational efficiencies for libraries. In addition, the miniload version of automated storage and retrieval systems can also make significant contributions to library service, be it public or academic. Most significant, though, is the economic benefit of AS/R techniques applied to libraries both in initial cost and the cost of operation.

In the area of operating efficiency, for example, because computer control is used, items in high demand are sensed by the system and, under software control, are moved to the front of the rack assembly as they are used and returned to the unit. This capability reduces retrieval time for high-use materials, while little used items, through this same software, gravitate to the rear of the unit. Items need not be shelved by Dewey or LC, rather they could be stored in random format, perhaps by size. In any event, the library can designate its storage scheme and the system will process the materials accordingly. For special interest groups or individual classes, books pertaining to a specific subject or representing a particular point of view could be requested in advance of their use and the AS/R would prepare a "kit" comprised of those items. The accuracy and speed with which specific materials can be requested and received is the basis for this level of support.

Connected to a second computer system, such as an automated public access catalog (PAC) or circulation control, a library user could designate a selection of titles on a subject using a computer terminal with confidence that items not checked out or in the open stacks will be made available within minutes.

This mode of operation contrasts vividly with current practice, wherein the library user must go to the stacks and "find" the item(s)—stacks, it must be added, which have been ravaged by others as they hunt their own materials, and which may or may not have been set straight through shelf reading before each user attack. The ability of the user to request specific titles with confidence in their timely availability is an inestimable service enhancement to any library.

Conservation considerations

The area in which the storage/retrieval machine works and in which the materials are stored is closed to staff and public alike. As a result, maintenance usually required for public areas is not necessary. From a preservation viewpoint, extensive lighting is not required, and once suitable temperature/humidity levels have been achieved, they are easily and economically maintained. These factors yield a facility that is inexpensive to operate and maintain while contributing to the preservation of rare materials. And, with regard to reliability, manufacturers and industrial users alike maintain that over 98 percent uptime is typical for miniload AS/R systems (as would be used by libraries). Finally, although people aren't usually allowed inside, periodic, scheduled preventive maintenance is the key to reliability.

Operational benefits aside, the real zinger, for libraries, is the cost and capacity of an AS/R system when compared to the equivalent cost and capacity of a typical library building. As a function of the capacity of an AS/R system and the planned and coordinated loading of materials into it, densities approaching 200 books per square foot are possible. Thus, properly designed, the system could absorb a significant portion of the typical library's existing collection, plus materials added over a ten-year period, in an extremely small area (e.g., 600,000 books in less than 4000 square feet). The result is a viable approach to zero open-stack collection growth.

And, since the AS/R system maintains exact statistics on the use of each item stored in the system, a list of unused materials can be requested from the system to guide deselection. The result is the ability to cap future library requirements for ever larger facilities. Finally, comparative operating costs for each of the typical library storage techniques and AS/R units are presented in Table 1. How is it possible to store for less and have the materials available in about one minute? Quite simply, depending on what is stored, AS/R units are 35 feet or more high, and support storage densities 19 or more times those traditionally achieved using open stacks (wherein height is constrained by human reach), and six times the density of moving aisle approaches (which are also limited by human reach).

Clearly this density of storage coupled with the delivery of requested materials in about one minute compares favorably to the common library user's experience of going into the library stacks and not finding the material at all.

How it looks

If any of the foregoing has captured your imagination, let's turn to

"What (will) these things look like?" and, "How big are they?" All in all, four basic components comprise the physical system (Figure 1): 1) the robot and floor pad with rails; 2) the industrial rack assembly and bins; 3) the workstation; and 4) computer controls.

The workstation need not be located at the same floor level as the rail on which the robot travels. Bins can be delivered to a workstation situated at any point within the robot's vertical travel limits. Bins need not be delivered directly to a workstation at the end of each aisle. Rather, conveyers of one type or another can receive the retrieved bin and transport it to a workstation at some distance from the storage facility. However, not only are remote workstations more expensive to build initially, the increased complexity of "remote" bin delivery could be a source of lower system reliability, higher maintenance costs, and an increase in the overall time from request to delivery for bins retrieved from the rack assemblies. Remembering that multiple delivery points were a contributing factor to the downfall of the pioneer Randtrievers (see Ellsworth) installed in libraries, history need not repeat itself.

Factors influencing size

There are two major factors peculiar to libraries that affect the size of the facility: 1) what will be stored and 2) how often will it be used.

What is to be stored is strictly a local decision. However, once established, the physical size of the materials to be stored must be determined in terms of how many items there are of a given height.

Since you can anticipate storing books, there are students of this sort of thing such as Freemont Rider and Keyes Metcalf to draw on. Thus, it has been asserted that about 95 percent of the books in a typical library collection are nine inches or less from fore-edge to spine. Similarly, books have an average width of 1.4 inches and 90 percent of them are 11 inches high. Also, it has been documented that about 85 percent of typical bound periodicals are 12.75 inches high or less and average 1.8 inches in width. Needless to say, the dimensions are known or can be readily obtained for boxed reels of microfilm, microfiche, micro-opaques, and the realia/exotica from the collection you anticipate storing.

By using statistics from the literature, or actually measuring the materials in the collection of the target library, it is possible to begin calculating the number of bins required. The bins themselves, of course, can be as plain pipe rackish or custom sculpted as you may conceive.

In any event, be prepared for interesting design sessions, and beware of the backyard tinker. Agree with the concept that an articulated capsule incorporating silica gel packets and resembling four feet of traditional solid oak library shelving would be A-OK. Then ask the advocate how long it would take to deliver 20,000 of them for under $70 each. Throughout such interludes, don't lose sight of the fact that while there are standard sizes based on the dimensions of the bin extractor mechanism, the bins you get will probably be fabricated for your installation and can be built to match the requirements of the materials in your library's collection.

The second factor, how often will it be used, leads to the peak retrieval rate you expect for materials in the retriever. This is a number reflecting the items per hour that the system must be able to handle. Since there are no hard-and-fast rules at this time, it is suggested that a review be made of in-house use and circulation statistics.

The peak retrieval rate, in this instance, means the largest number of items to be withdrawn from the stacks in a given time (e.g., 15 minutes), regardless of why, during the most active period of library use. While certainly not a rule of thumb, analyzing collection use statistics from two large academic libraries (collections over 650,000 volumes each) has provided some initial guidelines to the components of peak use.

For example, from this analysis a relationship was identified between recorded circulation and in-house use (the later requiring staff reshelving). It appears that 2.35 books are taken from the shelf and replaced by the user for every book circulated and/or taken from the shelf and left for staff to reshelve.

Counting costs

As with all good things, a price does apply. By this time, I'm sure you have deduced (correctly) that the AS/R system is just a machine that may be connected to another system and requires housing. As a result, cost follows the level of sophistication required of the retrieval system and the housing. There are areas of cost that can only be identified here, since the dollar amount they represent is a reflection of local requirements, local labor and material rates, and the value of the dollar at the time decisions are made. The areas for which you alone can determine local costs are:

1. Architect and engineer fees for site survey, preliminary planning, final drawings, specifications, and the like.

2. Software development, if required, to connect the system to an existing computerized library system such as circulation control or public access catalog. Retriever systems can be as dumb as an operator-driven keyboard or as smart as computers can make them; there are hundreds of thousands of dollars separating the two extremes. Know what you want and can afford before you jump in with both feet.

3. Construction costs are in direct proportion to the aesthetics of the structure. If you are attempting to preserve architectural symmetry, it could be expensive. If the existing building is on a view point or other geologic feature, engineering costs may exceed the price of the retriever system alone.

Table 1

Type	Sq. ft.	AC/ Lights	Janitor	Reshelve Oper.	Power	Prev. Maint.	Total	Unit Cost
Library stacks	60,000	63,000	81,420	24,000	0	0	168,420	0.281
Industrial shelving	40,000	42,000	54,280	24,000	0	0	120,280	0.200
Compact (motorized)	20,000	10,500	13,570	24,000	2,700	3,000	53,770	0.090
AS/RS (motorized)	3,750	863	1,115	27,170	7,642	4,000	40,790	0.068

On the other hand, if you have surveyed your storage needs carefully, the numbers you will have prepared can be used by any of the several companies selling miniload AS/R systems to provide a reasonably accurate cost estimate. Each firm has its algorithm. For those of you who can't wait and want a ball park insight into the cost of a system right now (without reference to architects, software development, or construction) you can multiply: the total number of bins under 12" high by $60; the number of bins 12" high or higher by $78; the number of aisles by $110,000; and the total number of feet of aisle by $125. Add up the products and the result is a nominal estimate for the rack assembly, bins (all sizes), robot, tracks and rails, and local "end of aisle" control (as of 1985). Ah, ah, ah, this is just a ballpark figure! Don't reach for the checkbook without consulting the companies for exact prices.

Operating and maintenance costs depend on how many retriever columns your system has, the volume of retrievals performed, and local wage scales. It also depends on the air conditioning you need locally. In addition, if, for example, there are five or more columns in your system, a full-time maintenance person may be required. Your supplier, however, and the experience of local industrial users will be your best source of information for maintenance costs although their experience will be with systems in constant use (typically, 24 hours per day). In any event, don't overlook contracting for maintenance if you are not into empire building (and expenditures for benefits, etc.).

Start-up costs will include loading the system which, depending on the library, may entail labeling and measuring each item, then physically moving the materials into the system. And, since the system will be new, there will be the sprinkling of minor problems and the catastrophic interludes we've all been through. For these moments of excitement, no dollar amount can be assigned.

And that's that! Automation in libraries has addressed paperwork and has been successful. Automation and robotics have been deemed successful in industry for over a decade. The techniques and systems stemming from automated warehousing are fully applicable to libraries. The need, peculiar to libraries, for ever-expanding facilities may trigger a revolution in library buildings and open the way toward vastly improved library service for generations to come.

Bibliography

AS/RS in the Automated Factory. Material Handling Institute, 1983. More brochure than book, this item provides a quick review of benefits, as one would expect from a trade association.

Back, Edward D. *A Layman's Guide to Control Systems Design*. SPS Technologies, 1983. The control systems addressed here, naturally, are for the automated factory, but could be applied to the way things need to be done in a library. Of interest is the categorization of functions performed in terms of their degree of mechanization (the "first degree" being manual with the "fifth degree," full automatic). A volume worth scanning to pique your imagination.

Case Studies, Featuring Practical Applications of Automated Storage/Retrieval Systems. Material Handling Institution, 1980. Focusing on industrial applications with an emphasis on photos of installed systems. Note the section on automated small parts system where an operator's station and console are shown. At $5, as Abbie Hoffman once said, "Steal this book."

Considerations . . ., for Planning an Automated Storage/Retrieval System. Material Handling Institute, 1982. Another brochure covering in line drawing format the variety of retriever configurations, conveyors, tracks, and structures that an AS/R machine might take. Includes an explanation of the steps taken in a retrieval cycle and a glossary. At $7.50, steal this one, too.

Ellsworth, Ralph E. *The Economics of Book Storage in College and University Libraries*. Scarecrow, 1969. A remarkable source of information about the Randtriever (with pictures). Fortunately, this book was published before the blush of novelty had faded from the Randtriever and, as a result, there are pictures of the smiling pioneers of this technology. Also included are brief descriptions and pictures of some of the more exotic devices designed to increase the number of books per square foot. Dated.

Metcalf, Keyes D. *Planning Academic and Research Libraries*. McGraw, 1965. Of particular note, from a historic viewpoint, is the chapter on "Housing the Collection" as it identifies the seminal researchers and number gatherers in the field of book sizes. This chapter also reviews the state-of-the-art in compact shelving and related techniques for increasing the number of items per square foot. More dated than Tompkins & Smith.

Material Handling Engineer (periodical). Similar to the above but more subdued and technical. Suggested only for those who want to get down on the subject (after digesting the Tompkins & Smith compendium).

Modern Material Handling (periodical). An excellent source of practical "how it was done" articles. While a manufacturers showcase for new material handling devices, this monthly also provides a good, current source of supplier information. If you wish to pursue the subject of AS/R systems in libraries and like to talk to sales representatives, est! est! est!

Rider, Freemont. *Compact Book Storage*. Hadham Pr., 1949. *The* work on book sizes. All others are ergotuers.

Slote, Stanley J. *Weeding Library Collections*. Libraries Unlimited, 1975. The focus is on public libraries, but the assessment of the impact of the unweeded collection on the provision of library service is universal.

Toffler, Alan, "Libraries," in *Reader in the Academic Library*. NCR Microcard Editions, 1970, p. 285-298. Reveals the philosophy of the open-stack library in readable terms.

Tompkins, James A. & Jerry D. Smith, eds. *Automated Material Handling and Storage*. Auerbach, nd. This compendium of articles by experts in the industrial field is the bible for material handling. Contents include almost anything you would care to know about the automated factory. Unfortunately it is expensive and dated. However, it provides encyclopedic coverage and, when coupled with the trade magazines in this field, will enable you to hold your own with sales reps and administrators alike. The dated material relates to the listings of suppliers, consultants, and related firms.

Unpublished collection use surveys conducted at California State University, Northridge and California State University, Long Beach, 1983.

Trends emerge from two decades of LJ's statistics on library construction

Financing Public Library Buildings

By Richard B. Hall

THERE WERE only intermittent attempts to chronicle the capital expenditures for U.S. public library buildings until 1968, when Hoyt Galvin first developed a comprehensive and consistent method of collecting this data published annually in the December architectural issue of *LJ*. The profession is indebted to Galvin for this massive, 20-year effort.

The *LJ* data provide a statistically significant, reliable sample, not the total picture. Further analysis of the overall expenditures for public library construction and the individual sources of funds reveals other useful information.

Table 1 summarizes expenditures for public library construction by source of funds. It shows that the amount spent on public library construction has varied significantly over 20 years. Despite that, with a few exceptions, the overall percentage from each source has remained relatively stable. From the outset, 90 percent of all capital development funds have come from the public sector, with over 70 percent coming from local public funds. On the average, state funds have accounted for less than five percent and private funds less than nine percent of all sources of funds for construction. Federal funds have varied most over the years, but on the average have accounted for approximately 16 percent of all expenditures.

Federal funding sources

Federal funds, although the most unpredictable, have significantly reduced the local funds needed for some capital projects and stimulated local, private, and state spending for public library facilities, particularly with the advent of LSCA Title II.

Until this year, the greatest expenditures for U.S. public library construction of all time took place in 1979. Nearly $200 million was spent, with an astounding $81.8 million (42 percent) coming from the federal government. About four times the normal federal share, it was the result of two federal funding initiatives.

Some $6 billion came from the Local Public Works Program of the Public Works Employment Acts of 1976 and 1977 (P.L. 94-369 and 94-447 respectively). Of the $6 billion, public library building projects received in excess of $133 million.[1] For communities that were prepared to begin construction immediately, this federal program was a bonanza. It required little or no local matching funds, and public libraries were reasonably successful in competing for these funds locally. In addition to public works funds, Congress approved an extension of the State and Local Fiscal Assistance Act (P.L. 94-488) providing an authorization of over $25 billion of federal revenue sharing.

Federal revenue sharing funds have always represented a substantial portion of the federal funds going into public library construction. Unfortunately there is no consistently collected data to show the exact amount or percentage. Galvin[2] did report in 1976 that approximately 73 percent of all federal funds came from local general revenue sharing during that year.

We may never see federal participation at the levels of the 1970s again. After this record level of expenditures, the federal percentage dropped consistently until 1985. It then recovered somewhat with the revitalization of LSCA Title II funds transferred from the federal FY 1983 Emergency Jobs Act (PL 98-8) appropriation of $50 million.

Federal share reached 20-year lows in 1983 (6.7 percent) and 1984 (4.1 percent), and again in 1987 (4.8 percent), dipping as low as $4.5 million in 1984. In these years drastic reductions in federal capital funds threatened to return public library construction to levels similar to the 50 years when it languished, from the end of Carnegie philanthropy until LSCA Title II.

Signaling the importance of federal funding over the last 20 years, *Public Library Construction 1965–1978* reports that LSCA Title II funded 1,917 library construction projects with $174,318,366 coming from Title II and $21,469,975 from other federal sources. This stimulated the investment of $528,893,615 in state and local matching funds.[3]

In its 1986 Annual Report on LSCA Special Activities[4] the United States Office of Education updates the figures and reports that 2850 public library buildings were built through LSCA Title II, utilizing almost $265 million from federal sources.

Much of the $50 million in federal Emergency Jobs Act funds is recorded in the 1985 and 1986 *LJ* statistics; and there will be more federal funds showing up in upcoming years due to federal LSCA Title II appropriations of $25 million for FY 1985, $21,102,000 for FY 1986, and $22,050,000 for FY 1987.

This resurrection of federal public library construction funding is most welcome since the statistics in the 1986 Annual Report on LSCA Special Activities shows that federal funds usually stimulate more than twice the amount of state and local matching funds. Many state construction programs were stimulated by either the demise of the LSCA Title II program in 1973 or by its resurrection in the early 1980s.[5] It is little wonder that state library administra-

Richard B. Hall is Library Building Consultant, State Library of Georgia, Atlanta

FY	Total $	State $	Federal $	Local $	Private $
68	91	0.9	20.8	68.9	n/a
69	107	1.1	26.6	74.1	5.4
70	98	3.1	22.9	58.3	13.3
71	76	3.2	13.4	53.1	6.5
72	95	1.4	11.8	74.1	7.2
73	101	2.6	8.7	77.5	11.9
74	83	1.8	7.6	67.4	6.1
75	81	2.8	11.5	58.9	7.7
76	125	7.5	27.4	77.4	12.4
77	132	7.1	20.4	95.6	8.6
78	91	6.9	17.4	57.6	9.1
79	194	15.3	81.8	83.9	12.8
80	120	4.8	33.3	73.1	9.1
81	140	4.9	22.4	100.7	12.1
82	157**	4.3**	17.4	112.6	22.9
83	82	11.3	5.5	58.2	7.1
84	110	7.1	4.5	94.0	4.0
85	140	5.8	17.9	97.0	19.3
86	158	8.9	11.1	117.0	20.8
87	217	12.8	10.4	180.0	13.4
TOTAL	2398	114	393	1679	210
AVG.	120	5.7	19.6	84.0	10.5
%	100	4.8	16.4	70.0	8.8

* As reported in six-year summaries of the architectural issue of *LJ*
** A State Library Building was deleted from data in 82

Years	Total $	State $	Federal $	Local $	Private $
1968 to 1977	98.9	3.1	17.1	70.5	7.9
	100%	3%	17%	72%	8%
1978 to 1987	140.9	8.2	22.2	97.4	13.1
	100%	5.8%	15.8%	69.1%	9.3%

tors look annually toward Washington with concern.

Federal funding for public library construction is threatened again by initiatives like the Balanced Budget Control Act of 1985 (PL 99-177, known as Gramm-Rudman-Hollings). Unless there is a turnaround, this budget reduction effort may kill the LSCA Title II program—similar to the loss of the federal revenue sharing program—and will likely create a trend toward decreased federal funding for public library construction.

Since federal funding has been drying up in recent years, the question is whether any other source can replace the federal contribution. The LSCA Title II program has been, and is, a tremendous capital development tool for public libraries, but as the past has shown, there is no guarantee that it will be in effect from year to year. It may well be that the only effective substitute for this program, or for federal funding in general, is the development of an ongoing state program for public library capital outlay.

State funding sources

Table 2 shows the average annual expenditures and percentages of the total by source for the first ten years of *LJ* data compared to the last ten years. This division of the data reveals what may be a trend in state support of library construction.

While the state-level contribution is the smallest percentage, it has almost doubled from the first decade to the second. State funds increased from $31.5 million in the early years to $82.1 million in the later years. This represents over a two-and-half-fold increase for state funds, making it the category with the largest percentage increase between the two decades. In Figure 1 it appears that state funding is on the increase over the long run. Two questions remain: Will state funding continue to grow? Will it ever be sufficient to replace the lost federal funds?

A survey of various state library agencies indicates that state funding for capital development will continue to grow, probably significantly. Approximately $130 million of recently appropriated state funds for public library buildings should begin to appear over the next few years in the *LJ* statistics as the projects are completed.

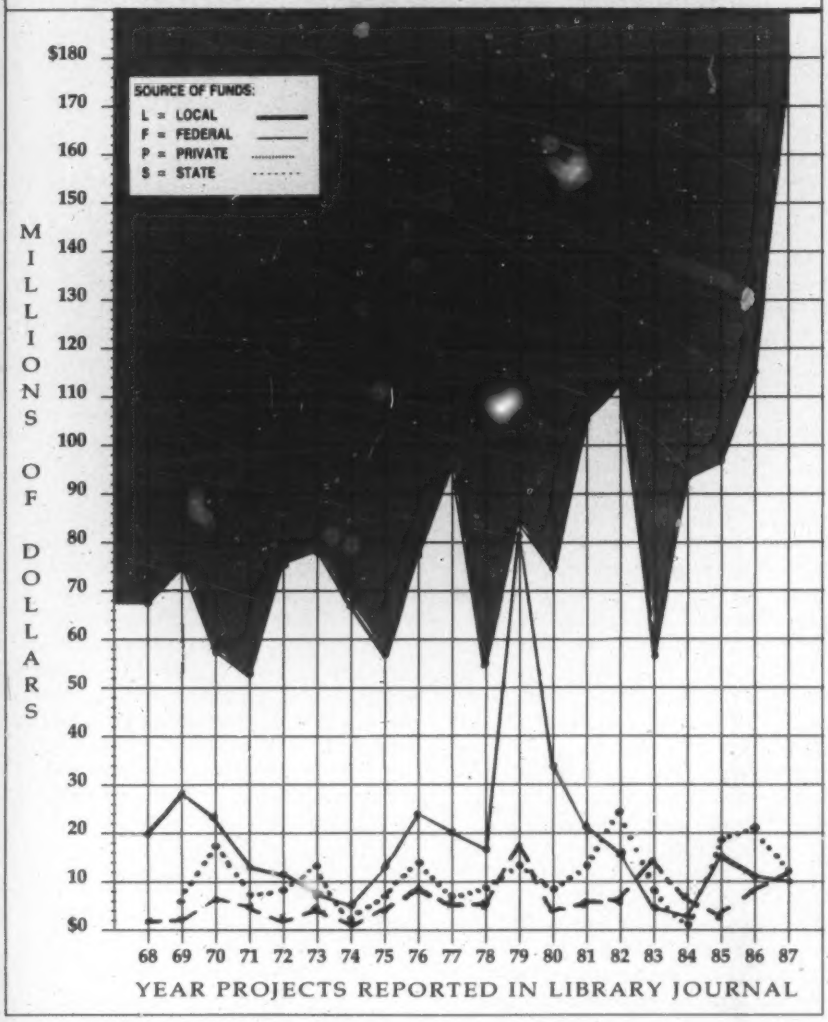
It is interesting to note that this figures of $130 million exceeds the overall amount of state funds ($113.6 million) reported for the last 20 years of data collection in *LJ*. Since the state-funded building projects are on different timetables for development, it is difficult to say when these appropriations will appear in the *LJ* statistics. A two- to four-year period will probably cover most of the projects recently funded with state funds. This means that the statistics from 1988 to 1991 should show state funds in the range of $20 to $30 million annually.

Over the years, state capital outlay programs have fulfilled an important role as seed money for local fundraising, similiar to the way that federal funds have stimulated both state and local construction funds.

Many states have had regular annual appropriations for capital outlay over the years, but recently new state construction programs have begun, due in some part to the resurgence of interest in public library construction stimulated by the recent though limited appropriations of the LSCA Title II program. States which have recently had new first-time appropriations for construction purposes are: New York, Illinois, Nevada, North Carolina, Massachusetts, and Alabama. Further, other states, such as California, have legislation in progress that may culminate in substantial new state library construction funds.

The advantages of state construction programs are many. Being closer to home, they are easier to influence and administer. Because of

FIGURE 1:
FUNDS FOR PUBLIC BUILDINGS BY SOURCE



their proximity to local politics, state programs are less likely to end abruptly, without warning. All areas of the state benefit, and state construction programs return public tax dollars to local communities in a highly visible manner. It is this local control and visibility of a state matching program which makes it a natural partner for library capital improvement projects.

Local sources

The major and most stable source of funding for public library construction has always been local public revenues. Over the past 20 years, 70 percent of all funds expended for public library construction have consistently come from local public revenues.

Although local funding sources have been the most consistent over the 20-year period, there have been unusually high or low deviations in several years which illustrate a direct relationship to federal funds. In 1984, of the $110 million spent for public library construction, $94 million or 85 percent came from local sources. This is the highest percentage of local funds for all 20 years because the federal share of $4.5 million was at an all time low of four percent. This happened in 1974 and 1987 with local shares of 81 percent and 83 percent, and federal shares of nine percent and 4.8 percent, respectively.

In 1979 when the local share was the lowest (43 percent), the percentage of funds from federal sources was at its all-time high (42 percent), the only year when another source of funding came close to matching local sources.

Local bond issues

The greatest number of projects funded from only one source are funded by local bond issues. The projects usually tend to be the larger ones or part of a large bond issue that funds numerous smaller library buildings. While it is difficult to determine the exact percentage of local funds raised by public bond issues compared to those raised from direct operating revenues, the local public bond issue is probably the most common method of raising large amounts of capital for library improvements. There has never been a serious attempt to analyze the percentage of funds from local bond issues as opposed to other local sources.

There have only been a few attempts to systematically analyze the reasons local library bond issues succeed or fail. Herbert Goldhor, recently retired director of the Library Research Center of the University of Illinois, reported that over two-thirds of the library bond issues held in the Illinois from 1980-85 were successful.

This encouragingly high rate of voter approval for library bond issues is further supported by data from Goldhor's unpublished national survey of *Public Library Referenda in 1985*. Again, about two-thirds of all local bond issues held were successful in the states participating in the survey.

LJ and the author have begun collecting data on local referenda for public library buildings in an attempt to fill this void in the literature. As more and more of the burden of funding is placed at the local level, it will be important to share various creative methods of financing.

Private sources

Partnerships with the private sector have been around for a long time and they are fashionable again. Private philanthropy of the kind sponsored by Andrew Carnegie has always been the backbone of private sector financing for public library buildings. Around the turn of the century, the private sector provided its highest percentage of funding for public library buildings, but as the Carnegie program declined so did the dominance of private fundraising for capital improvements. Never again would the private sector regain its preeminence in public library construction.

In the last 20 years, building funds from the private sector have averaged less than nine percent. While this percentage has varied from a low of 3.5 percent in 1984 to a high of 14.5 percent in 1982, it appears to be relatively stable over the 20-year period. Even though recent years' percentages are high (14 percent in 1985 and 13.2 percent in 1986), private sources do not appear to be significantly on the increase as can be seen by comparing the percentages for private funds from 1968

to 1977 (eight percent) to the time period from 1978 to 1987 (9.3 percent) in Table 2.

While there have been many notable gifts from one benefactor for public library sites and buildings in the last 20 years, overall there have not been a large number of well-organized private fundraising campaigns. This type of financing has often occurred, but it has not been at the forefront.

A well-planned private fundraising drive generated $11 million for the Dallas Central Library, close to half of all reported funds raised from the private sector in 1982. In 1978, the community of Allentown, Pennsylvania raised $2.7 million for a public library building in a private fundraising campaign that was termed an "amateur effort."[6] This campaign is well documented in the proceedings of the 1980 ALA conference program entitled "Financing and Promotion of Public Library Facilities." Kathryn Stephanoff covers the major steps of a broad-based campaign, but acknowledges that most successful private fundraising campaigns secure 75 percent of the total from three or four major gifts. Many other major private fundraising efforts in the last 20 years have raised substantial amounts of funds for public library construction.

In many of these projects private sector funds have attracted local public funds. The reverse has also been true: state and federal grants have frequently stimulated private giving to public library capital projects. Private funds for public library buildings, however, have never been able to totally meet the need. The recent passage of the Tax Reform Act of 1986 (PL 99-514) has a negative effect on donations to nonprofit organizations and may diminish private sources of capital funding. This change in the tax law is of concern to those anticipating not only private funds for building projects, but also gifts of land which could previously be used as tax write-offs. Private funding is not a candidate to replace declining federal funding. Relatively few libraries have been capable of mounting private fundraising drives necessary to raise the substantial amount needed in public library facility development.

Future trends

The 1979 data show what a major influx of federal funds can do for capital outlay expenditures. Unfortunately, this kind of increase in federal funding is not likely soon. Major increases in scheduled federal appropriations affecting capital outlay for public libraries similar to those proposed by the late Senator Jacob Javits in the National Library and Information Services Act during the last LSCA reauthorization are not likely in the current climate.

The Javits bill would have established appropriations of $150 million per year for public library construction. This is the level of federal funding needed consistently to even begin to meet the national need for new public library space that was identified in 1980.[7] That survey showed a need for over 2900 public library building projects costing in excess of $2.3 billion (in 1980 dollars) over five years.

It will likely take considerable effort just to hold on to the current levels of LSCA Title II funding through the next few years and into the next decade. Federal funds have on the average contributed approximately 16 percent of the funds expended for public library construction. While this amount is significant, the importance of the LSCA Title II program and the availability of federal funds in general may lie more in the fact that they have been responsible for stimulating large amounts of state, local, and private funds for public library capital outlay purposes. The funds attracted may be funds which otherwise might never have been used to build public libraries in this country.

It is clear that capital development funds have never kept up with the space needs for public libraries regardless of the use of multiple funding sources. It is also obvious that the burden of public library capital development funding will fall more heavily on the shoulders of state and local governments.

The development and maintenance of capital outlay programs at the state level may be even more crucial than first thought if the continued overall decline in effective buying power for public library construction is to be slowed. While state capital outlay for public library construction has historically been the lowest average percentage (less than five percent) of the four sources, it appears to be on the increase.

If this trend continues, it is possible that state funding may, at least in some part, replace lost federal funds. It is unlikely that state programs could ever fully take the place of the LSCA Title II program, but it would be prudent for state library agencies to reassess their public library space needs and explore the possibility of establishing a statewide grant program for capital outlay.

Many states currently have the opportunity, while there is still some Title II funding available, to use this program (or its demise) as leverage to create new state funding initiatives. Ironically, it could possibly be that the real legacy of a slowdown in federal funding for public library construction is the establishment of strong, ongoing state programs.

If state programs fail to temper the decline in available funds for public library construction purposes, then local governments will clearly be called upon even more than in the past to fund new buildings. Local funding agencies will have to provide more than the customary 70 percent, or else capital development for public libraries will be severely impaired.

Finally, if local funding is to be even further increased, then it will become necessary for local library officials to become more sophisticated in obtaining local capital funds. Specifically, the library profession will need to develop better information sources covering the process of passing local referenda for library buildings. The sporadic data that has been gathered to date shows a very high success rate on average (two-thirds), but much study is needed to help insure even higher rates of success, and to encourage some of those who fear failure to try this approach.

References

1. Gordy, Frank William, "The Local Public Works Program: Impact on Public, School, and Academic Libraries," *Public Library Quarterly*, Spring/Summer 1982, p. 52.
2. Galvin, Hoyt R., "Public Library Buildings in 1976," *LJ*, December 1, 1976, p. 2440.
3. Erteschik, Ann M. & others, comps., "Public Library Construction 1965–1978: the Federal Contribution Through the Library Services and Construction Act." HEW, Office of Libraries and Learning Resources, Office of Education, GPO, 1978, p. 16.
4. Cohen, Nathan M., "Public Library Construction, LSCA Title II," in *Annual Report on LSCA Special Activities*. Office of Educational Research and Improvement, Library Programs, U.S. Department of Education, February 1986, p. 2.
5. Hall, Richard B., "LSCA Title II and State Aid," *Interface*, Spring 1985, p. 4.
6. Stephanoff, Kathryn, "Private Sources," in Hall, Richard B., ed. *Facilities Funding Finesse*. LAMA, American Library Assn., 1982, p. 13.
7. Holt, Raymond M., "Buildings," in Wedgeworth, Robert, ed. *The ALA Yearbook*. American Library Assn., 1983, p. 82.